

***Nistam Ka-ke Asihkokechik Puskaw-askihk: An***  
**Assessment of Besant-Sonota Pottery on the**  
**Canadian Plains**

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## **Opening Statement**

Archaeology since the coming of the European to Turtle Island (North America) has been a contentious issue with many First Nation peoples. Early in the century, the archaeologist and anthropologist were seen as aliens intruding into the secrets of an ancient lifeway practiced by the people. First Nations, since the arrival of the European to the North American continent, have gone through many cultural changes. Adaptation, in any form, was the key to survival since time immemorial.

Along with cultural change that was spurred on by colonialism, came the impact of decimating epidemics in the 1700's and 1800's which contributed to the loss of culture history. Traditionally, the history of the people was kept alive through oral tradition that was assigned to certain individuals and families whose prime responsibility was to maintain it. The history of the people was handed down from generation to generation. With the onset of residential schools, the age old practice began to deteriorate. As a result, when elders died many of them took with them thousands of years of oral history because the younger generations had failed to listen. Within the last four decades a generation has emerged which has been attempting to recapture a lost heritage and has been attempting to revitalize the culture before total assimilation into the present mainstream Canadian culture occurred. Whatever remains of the oral tradition is perceived to be invaluable and many ceremonials and traditional practices have been revitalized. However, much of the oral tradition regarding the histories of the many First Nation peoples has been lost forever.

It is for this reason that the author has come to see the validity of archaeology and anthropology. Archaeology has allowed First Nation individuals to explore a long forgotten history. The past lifeways that once flourished on the landscape can be revealed through archaeological interpretations. Aboriginal heritage and history has personally been an area of interest which extends from one aspect, beyond the age old practice of oral tradition. The tangible elements of a culture's past, are written into the annals of the landscape in the form of archaeological data. First Nation students must traverse ancient customs or what cultural anthropologists term "tribal taboo" in order to acquire more knowledge about their ancestors.

One of the main reasons for selecting the topic of assessing Sonota Besant pottery on the Canadian Plains was because of the author's involvement in two sites excavated in Southwestern Manitoba as an undergraduate student at the University of Brandon. Very little was known about the earliest developments of pottery on the Canadian plains and, therefore, with the increasing number of Sonota-Besant pottery bearing sites, it was decided that these sites should be studied in further detail.



## **Abstract**

As archaeologists, our understanding of the past lifeways of First Nation people is like a pebble in a mountain. We peer through windows of darkness and attempt to reconstruct and interpret the past. First Nation peoples have failed to fully maintain the knowledge of their ancestors and therefore much has been lost. Much of what remains of the oral tradition only goes back a few generations. There are, however, legends that echo a history that goes as far back as the ice sheet and the megafauna that roamed near it. There are no detailed depictions of the history of a specific First Nation. If it has survived through the cultural collision between the Native American and the western world, then it would be truly rare. However, with the study of the material culture we are beginning to glimpse into the past. For the past few centuries, European descendants, mainly archaeologists, have accumulated a substantial amount of archaeological data spanning several thousand years of First Nations history.

It has been stated that approximately 2000 years ago an archaeological cultural phase, known as Besant, emerged on the Northern Plains. It has been widely recognized in the discipline as one of the most sophisticated bison hunting cultures to thrive on the Plains. Later a pottery-bearing sub-phase called Sonota was also identified. Their occupation of the Northern Plains spanned a period of 800 years before the lithic tool and pottery making technology changed.

The pottery making technology of this group was comparable to that of other archaeological cultures during the same time period,

the Middle Woodland period. Very little is known about the Woodland wares that were produced on the Northern Plains. In the early 1970's it was suggested that the culture produced unique wares. Several sites with this pottery were identified in the northern United States. During this same time period, very little was known about Sonota-Besant sites on the Canadian grassland and adjacent parklands. As archaeological research progressed, more and more pottery with characteristics similar to Sonota wares was unearthed. Sonota-Besant vessels are cord-roughened and/or smooth and decoration, although limited, consisted of either punctates or a combination of bosses and punctates. An assessment of the pottery despite the limited number of sites was necessary in order to determine its characteristics and emergence onto the Canadian Plains.

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Lastly, my father's band, the Norway House Cree Nation, must be acknowledged for their sponsorship and support. A special thanks has to go to my sons Chris and Kyle, my mother Mary Scribe and the rest of the family for their encouragement. I dedicate this thesis to my mother's great grandmother *Eyogapte-kina-wiyan* (Clay

Dish Woman) of the Nakota nation. She lived among the free ranging bison herds of the Cypress Hills region.

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## **1.0 Introduction and Overview of the Study Region**

### **1.1 Introduction**

As archaeologists, we peer through windows of time into the darkness in the attempt to solve mysteries of past lifeways. Since the late 1940's, there has been a substantial accumulation of archaeological data that spans several thousands of years of First Nation occupation on the Canadian Plains. This accumulation of archaeological data has resulted in the necessity to analyze and assess the recovered cultural materials. This is in order to acquire a more explicit understanding of the ancient lifeways and history of First Nation peoples.

Archaeological research on the Northern Plains in the past has focused attention on special purpose sites such as butchering and kill sites with the main point of attention given to lithic tool assemblages. Clay vessels were considered exotic, but not worth the expenditure of any in-depth analyses (Johnson 1977:37). The recovered potsherds were recorded and catalogued as being associated with a Woodland component. The emergence or development of pottery studies on the Canadian Plains is limited. The earliest pottery-bearing culture has recently been associated with the Besant phase, or specifically the Sonota subphase which is believed to have dominated the Northern Plains approximately 1500-2000 years ago. Archaeological research concerning the Sonota subphase and the Besant phase has resulted in varied interpretations and hypotheses in the field of Plains archaeology.

Besant-Sonota was produced by a grasslands-adapted group that mastered the most impressive bison procurement strategy known to archaeologists today. They reflect an increased sedentary life style along with a population growth. They constructed earthen burial mounds and produced ceramic vessels. Plant gathering and small scale horticulture has also been associated with the group (Syms 1977, Reeves 1983, Gregg 1983).

Over three decades ago, a number of Canadian archaeologists were under the impression that Besant pottery was not commonly found among the diagnostic artifacts on the Canada grasslands. The presence of pottery has, however, become increasingly evident within the last few decades and has been adding to the growing archaeological inventory. The intent of this thesis is to assess potsherds recovered from a number of systematically-excavated Besant-Sonota pottery-bearing sites across the southern Canadian Grasslands. It is the author's hope that this study of pre-contact pottery will aid and enlighten archaeologists and expand the present understanding of the early ceramic tradition on the Canadian Plains.

## **1.2. An Attempt to Recapture a Vanished Legacy; A First Nation's Perspective.**

Archaeology to First Nations is an alien way of viewing the past. However, this view differs in various degrees from one First Nation to the next. A vast majority of First Nation history was maintained through the practice of oral tradition. To make archaeology relevant to First Nations, the challenge is to combine a

culturally-based method of maintaining knowledge and history with a scientifically based one.

In regards to their views on precontact North American cultures, archaeologists in the past have been less sensitive to the contemporary culture. Classifications used to describe the cultural phase have derived from a Eurocentric perspective. This is to be expected because of limited involvement by First Nations within the discipline. As an example drawn from many, Vickers (1994:9) states the following:

The Besant phase, classified within the "Late Plains Indian Period" by Dyck (1983:110), is considered by Reeves (1970:18) to be the last expression of the Late Middle "Prehistoric Period".

This is one of the reasons that the subject of archaeology has been seen as a contentious issue by many First Nations people. The terms, primarily the use of "Indian" and the use of "prehistoric", have been found to be politically unacceptable and are found to be culturally insensitive by the author. The early literature depicting the ancestors of First Nations has been loaded with much bias.

The use of the term prehistory is considered to be justly used in the field of archaeology because it defines the period of time before written history. The terminology applied to the study of First Nation peoples has been politically incorrect and has created contention. The first peoples preserved their own history through stories and legends and by designating families and family heads to keep the record of the nation's history (personal communication with elders). A prime example of keeping record is the winter count blanket or robe which supplemented the oral tradition. However, the

most recent terminology used in the field of archaeology is "pre-contact," as in the pre-contact period. The selected choice for the author is pre-contact or pre-Columbian to represent the record of human occupation on the Northern Plains. This selection is a more general term and not as specific as the other terms used that clearly segregate time into sequences. Changes in the terminology will slowly occur as more First Nation people enter the field of archaeology. For now, some of the existing archaeological terms relating to the First Nations and time will be used in this thesis.

The First Nation traditional understanding of the projectile point is far different than that of the archaeologist. It is a common belief among many First Nations that they were made by the *memekwesiwak*, or the little people, who live in sandhills and riverbanks on the prairies. It is understood that they traded these points along with other stone tools with human beings for such things as meat and hides (Mandelbaum 1940; Pettipas 1994:105; oral tradition).

A similar interpretation was supported and verified by the recollection of the author's grandfather, Charley Rider. An old friend told him that on special nights the sounds of stone pecking could be heard on the hillside by his house. The following morning several projectile points would be found scattered throughout his garden. It was believed that this was one of the places where the little people made arrowheads. The author's grandfather stated that he witnessed such an occurrence while camping at the friend's place on a northern Montana reservation.

The loss of information regarding the development and origin of pottery is a failure in preserving knowledge through the practice of oral tradition. Many First Nation elders carried with them generations of information to the spirit world. This was partly due to the cultural and social changes that First Nation peoples experienced when two cultures collided. The oral accounts only pertain to the uses of clay pottery and do not give any detailed information about the manufacturing techniques. However, in the case of the ceramic tradition on the Canadian grasslands, it is believed by archaeologists to have existed for approximately 2000 years, ending with the arrival of the European fur trade industry.

During the contact period, ethnohistoric accounts of pottery were minimal. The technology of making pottery was also unknown to early archaeologists. However, the pottery manufacturing accounts that did exist related to groups of people given names like Assiniboine, Plains Cree, Arapaho, Northern Shoshoni, Cheyenne, Blackfoot, Gros Ventre and Kutenai. Pottery making is best known for sedentary peoples such as the Pawnee, Arikara, Mandan and Hidatsa (Syms 1977).

An account of pre-contact pottery that has been revealed to the author through First Nation oral tradition describes the sentimental values that were attached to clay vessels by the owners. According to the account, when one of these clay pots broke, the owner literally wept over the loss (personal communication, 1996, with Edwin Tootoosis which was part of a story told to him by his father, John B. Tootoosis). A similar account is given by Joseph Ratt's mother-in-law from Stanley Mission (Meyer 1987:189). These vessels may have

symbolized a long forgotten way of life or memories of an ancestor who may have made or owned the pot. They were also believed to have deep spiritual meaning as life during this time period was considered to be very sacred.

The Cree name of a clay vessel is *askicos*, *aski* referring to the portion of mother earth from which it is made. *Askew* also refers to pot or kettle (Meyer 1987:190). The term *oyakan* is another Cree word for vessel or dish (Meyer 1987:190). The word for dish, jar or vessel in the Cree dialect the author is accustomed to would be, *mitonakan*, literally translated it would mean, mouth (*miton*) vessel (*onakan*) suggesting its use as to drink or eat.

Another account of pottery is found in one of the names of the author's ancestors of approximately four generations. The *Nakota* (Assiniboine) name for the ancestor was Clay Dish Woman. The origin of this name has been lost through time, but echoes the use of clay ceramics. It is clear that the legends and mythology of some First Nation peoples reflect a long forgotten ceramic tradition.

From the author's own cultural perspective, First Nation people do have a history and it was transmitted orally during the free ranging buffalo hunting days. It was not until the reservation period that their way of life was radically affected. It is only within the last quarter of this century that archaeologists have begun to seriously attempt to make the necessary changes to accommodate a better working relationship with First Nations' people. It is the author's intention to enhance First Nations' heritage and history by using archaeological research. Archaeological analysis of the material

culture of past First Nations peoples can be used as a tool to provide an outlet for reconstructing a portion of a vanished legacy.

### **1.3 Purpose Behind the Research**

In the last few decades there has been an increase in the number of Besant phase and Sonota subphase sites discovered across the southern portion of the Canadian grassland. The focus of this thesis research is to assess a number of these pottery-bearing Besant-Sonota sites that have been systematically-excavated.

There have been a number of speculations proposed for the origins of the pottery type. The intent is to gain a more complete understanding of how the ceramics may have originated on the Northern Plains and to answer questions as to what may have been the influencing factor that contributed to this development. It is to also determine if the Besant and Sonota peoples truly produced pottery or if it was obtained from other coeval groups. In addition, it is an attempt to expand on the present understanding of Besant phase and Sonota subphase developments. Differing views and misunderstandings have surfaced in earlier archaeological research relating to the cultural groupings and their developments.

### **1.4 Introduction to the Thesis Problem**

Middle Plains Woodland sites, primarily those assigned to the Besant and Sonota cultures, have not been studied in great detail in either Canada or the United States. The definitions surrounding the cultural phase have been found to be vague and sometimes confusing. In most cases, the pottery tradition associated with the



cultural phase has been identified and classified on the basis of general observations with an absence of detailed quantitative descriptions. Quite often in the past, the pottery was avoided by archaeologists and assigned only a Plains Woodland affiliation.

In this research, the preliminary inspections will identify and determine any physical similarities and attributes found among the pottery assemblages. In a more intense examination, distinct features found on pot sherds and rims will be defined and assessed. The analysis is an attempt to determine the diffusion of the ceramics as well as to identify the manufacturing techniques, styles and decorative techniques that were applied. The morphological characteristics are part of the assessment.

The interest in Besant-Sonota pottery was stimulated by personally supervising the excavation of two pottery bearing sites in south-central Manitoba. As a result, this has been the initiating factor for pursuing the following research because very little is known about this pottery type.

The eastern geographical range of Besant-Sonota on the Canadian grasslands is in the parklands of Manitoba where approximately 150 sites have been identified. Pottery from eight of sites has been identified as conforming to Besant-Sonota styles. The author has been involved in the excavation of three of these sites and these will be discussed in Chapter Four. These sites were found along the Pembina trench and near the Souris River .

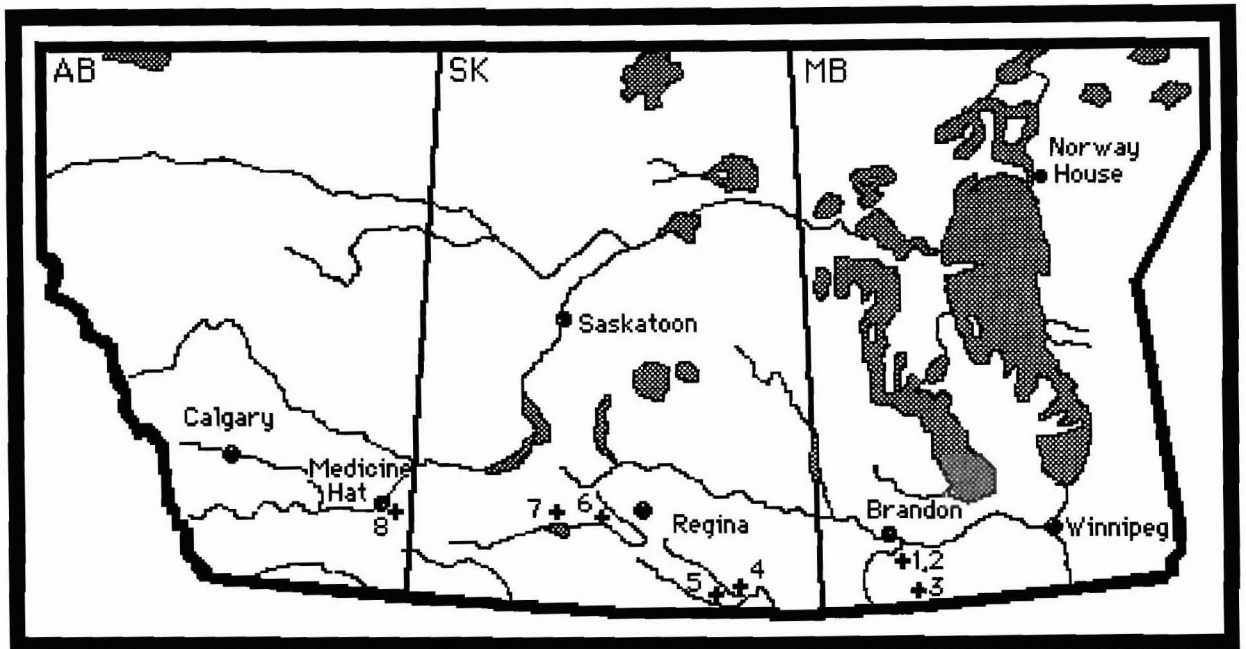
In Saskatchewan approximately 600 sites have been identified with Besant artifacts. One site of interest is located in close proximity to the Souris River valley in the southeastern corner of

Saskatchewan where it re-enters Canada. Another important site is found along the Moose Jaw River and within the city with the same name. Another site is located on the breaks of the Missouri Coteau escarpment near the town of Mortlach, Saskatchewan. The latter two sites are considered to be among the earliest systematically-excavated sites in the province. There are a number of less significant sites with possibilities of pottery conforming to Besant-Sonota styles that will be included.

In Alberta, 142 Besant sites have been identified (Vickers 1986:14). Of this collection of sites, two have yielded Woodland ceramics which are considered to be associated with the Besant assemblages. However, to date, the only systematically-excavated Besant site in the province which has yielded potsherds is the Ross Glen site located near the city of Medicine Hat, on the banks of the South Saskatchewan River.

The ceramic-bearing sites selected for the assessment of Canadian Besant-Sonota sites are as follows: the *Pinew Watchi* site (DiLw-2), *Wapiti Sakihtaw* (DiLw-12), *Nahastewin* (DiLt-17), the Walter Felt site (EcMn-8), the Garratt site (EcNj-7), the Crane site (DiMu-93), the Bennett site (DjMw-27) and the Ross Glen site (DiOp-2). There are also a number of other sites that contained a very small sample of pottery (less than 3 sherds each) that will be discussed in the assessment. The Besant-Sonota pottery-bearing sites selected for the research are illustrated on the map of the Canadian grasslands in the Figure (1.1). As well, approximately ten additional sites have been confirmed as having Besant-Sonota

pottery. These sites have very small samples and have stratigraphic problems



**Figure 1.1:** Systematically-excavated Besant-Sonota sites on the Canadian Plains:(1) *Pinew Watchi* (DiLw-2), (2) *Wapiti Sakihtaw* (DiLw-12), (3) *Nahastewin* (DiLt-17), (4) Bennett DjMw-27, (5) Crane (DiMu-93), (6) Garratt (EcnJ-7), (7) Walter Felt (EcNm-8), (8) Ross Glen (DIOP-2),

An assessment of northern United States Besant-Sonota sites will also be included for comparison. North and South Dakota, for example, have a large number of sites with Middle Plains Woodland Sonota pottery associated. Most comparisons will be made on the basis of the literature available on the subject. This research is to also provide an overview of the Besant pottery producing sites found not only in Canada but throughout the Northern Plains region. Canadian specimens will be compared with their American counterparts.

For the purpose of this assessment, preliminary inspection will be made to determine physical similarities and identical attributes of

the pottery samples and a number of characteristics will be examined. Distinct features will be identified, thus providing a review of the definitions and application of the taxonomy as it applies to Besant-Sonota pottery. The attempt is to determine what makes the Besant pottery distinct from that of other Middle Plains Woodland vessels which bear similar characteristics.

The analysis of the pottery specimens is also an attempt to determine the diffusion of manufacturing techniques and styles as they are identified. The morphological characteristics and attributes such as lip shape and profiles including exterior surface finish, temper, and paste quality will be included as part of the analyses. Decorative techniques and any indications of possible coil breaks will be noted. The overall composition of the pottery will be pursued and trends will be identified. This assessment will determine the affinity that exists among the Besant phase sites found throughout the Northern Plains region and will result in a general synthesis of Besant-Sonota pottery.

The similarities and differences that exist between Besant-Sonota and other contemporaneous Middle Woodland pottery assemblages will be explored. These contemporaneous groups sharing similar cultural characteristics to Besant-Sonota are the Valley complex, Loseke phase, Malmo phase, Keith focus, Fox Lake focus, Laurel culture and Avonlea phase. The Hopewell Interaction Sphere has also been considered to have influenced the cultural phase under study. This assessment is an attempt to understand the development of ceramic wares on the Northern Plains.

Three decades ago, Sonota and Besant were proposed to be two quite distinct cultures, or Sonota was considered a subphase of Besant. There were also questions, in the field, of whether the culture was brought onto, or developed in place on the Northwestern Plains. No indisputable answers have yet emerged. The close examination and assessment of pottery here is expected to illuminate our understanding of the origins and developments of Besant-Sonota on the Northern Plains.

### **1.5 Geographical Overview of the Study Region**

One has to consider the natural environment and diverse geography that was occupied by the ancient nomadic bison hunting culture known as Besant-Sonota. The regions of the grassland encompass a band across the southern Canadian interior Plains. Today, this area comprises three political subdivisions known as the Canadian Prairie Provinces.

The limit of this grassland region, starting in the east, borders where the boreal forest and Lake of the Woods abruptly end and the Manitoba parkland begins. To the south lies the vast expanse of the American grasslands that extend to the Gulf of Mexico. The western region of the grasslands fringe the foothills of the snow-capped Rocky Mountains. Arching around the northern sector of the region lie the aspen parklands and further to the north spans the continental wide boreal forest.

Most waterways drain into tributaries of the Churchill River in the north, the North and South Saskatchewan Rivers on the central grasslands or into the Assiniboine River and its tributaries, the

Qu'Appelle and Souris Rivers in the south. The Assiniboine River, eventually merging with the Red River downstream, then flows into Lake Winnipeg, a remnant of Glacial Lake Agassiz. All these tributaries and rivers ultimately drain into Hudson Bay (Dyck and Morlan 1995:5).

To be more specific, the northern boundary of the Besant-Sonota area is the Assiniboine River in Manitoba, the North Saskatchewan River in Saskatchewan and the Red Deer River in Alberta. The southern boundary for the study region is, of course, the Canadian/United States border. The study region only accounts for the northern extremity of the collective Besant region. There are a number of related sites found on the northern plains of the United States.

Beginning on the Plains and Parkland region of south-central Manitoba, the topography consists of rolling hills and valleys above the Campbell Beach ridge that outlines the old shore line of Glacial Lake Agassiz. Avery, the most easterly known Besant-Sonota pottery bearing site in the study region, is near Rock Lake, part of a chain of shallow lakes along the Pembina River Valley. The Pembina River Valley is a broad, steep-sided channel that formed as a glacial spillway, draining Glacial Lake Souris (Joyes 1970:209).

The Souris Basin is host to the majority of the Besant-Sonota sites both in Manitoba and Saskatchewan. The Basin consists primarily of Grassland or Prairie (Bird 1930; Rowe 1972). Prior to the contact period, the undulating plain that overlooked the Souris River valley, including the broader Canadian Plains, was an extensive grassland with sloughs and small ponds with forested valleys

(Buchner 1980, Nicholson 1986). The termination of intensive bison grazing and frequent prairie fires in modern times has led to the development of more aspen clumps (Nicholson 1986).

Moving westward, the study region includes sites found on the Glacial Lake Regina. The alluvium floodplain of Moose Jaw Creek was a collecting channel that drained into the Qu'Appelle spillway, the lower outlet of Glacial Lake Regina (Morgan 1979:13). This also includes the Sandy Creek and Thunder Creek channels that belong to the glacial drainage system of Glacial Lake Regina. It consists primarily of prairie grasses with small clumps of stubby trees and brush which occurs in sheltered locations along the creek banks or in upland gullies including some areas of stabilized sand dunes where there is a high water table (Wettlaufer 1955:65). With the exception of modern agriculture, the topography during the time of the Besant-Sonota era was essentially the same as at present (Morgan 1978:13).

One of the most prominent topographical features found in southern Saskatchewan is the Missouri Coteau (Kehoe 1973:6). This feature stretches north-northwest from the Souris River Valley in the southeast corner of the province across into Alberta. The Coteau rises abruptly approximately 182 meters on the north-facing escarpment (Kehoe 1973:6). It was noted by Kehoe (1973:6) that the valleys along the escarpment resulted from erosion dissecting pre-glacial slides where streams penetrated the contact between the shale bedrock and the glacial drift causing slump blocks to occur and as a result, these slumps and benches created in the coulees functioned as natural bison traps.

The western part of the study area also encompasses the eastern portion of the Alberta Plains. Covering the area is a mantle of glacial moraine which forms a knob and kettle topography and contains fluvial deposits consisting of silty clay lake deposits along with sand and gravel outwash and areas of wind deposited sand dunes. Some areas are fairly flat as compared to the knob and kettle region (Quigg 1986:8).

The study region consists of the Canadian grasslands, but relevant information will also be included from the states of Montana, North and South Dakota, and the northeast portion of Wyoming. The study region, in summary, covers a band across the southern portion of the three prairie provinces between the 49th parallel and the 51st parallel.

### **1.6 Flora and Fauna of the Grasslands**

Prior to the introduction of modern agriculture and cultivation, the Canadian grassland consisted of the shortgrass plains and the long grass plains or prairie. According to Coupland (1961:137), the grasslands included the long grass prairie in south-western Manitoba, extended to the aspen forests in the foothills of the Canadian Rockies and included the boundary of the northern Boreal Forest. Within this area, the short grass prairie extends eastward from the foothills along the international boundary to the vicinity of the Saskatchewan-Manitoba Boundary, forming a triangle with the apex located along the Saskatchewan-Alberta boundary. In the past, blue grama (*Bouteloua gracilis*), Buffalo grass (*Buchleio dactylidis*) and mid-height grasses such as needle-and-thread grass (*Stipa*



*comata*), Western wheat grass (*Agropyron smithii*) and Green Needle grass (*Stipa viridula*) dominated the short grass plains (Kuchler 1964 :64:66). However, a number of other less common grass species were present in southern Alberta, Saskatchewan and those states in the central and southern Plains.

The short grass prairie is bordered on the west and north by Fescue Prairie, and on the east by the transitional grasslands (Morgan 1979:10). The boundary between this prairie vegetation and the short grass plains is variable and primarily conditioned by rainfall (Wedel 1953:500-501). Found within this grassland zone where moisture conditions in low-lying areas were favorable (Coupland and Rowe 1969:73), are small stands of trembling aspen (*Populus tremuloides*). Scattered throughout this zone are balsam poplar (*Populus balsamifera*) and bur oak (*Quercus macrocarpa*) which are found on better-drained riparian sites. Bur oak is found primarily in southern Manitoba and the Qu'Appelle valley in Saskatchewan. Other deciduous species in the region include eastern cottonwood (*Populus deltoides*), green ash (*Fraxinus pennsylvanica*) and Manitoba maple (*Acer negundo*) which occur in river valleys. White elm, (*Ulmus americana*), black ash (*Flaxinus nigra*) and Basswood (*Tilia americana*) are common in southern Manitoba (Rowe 1972). Willow (*Salix* sp.) would have grown in areas with high soil moisture (Ellis and Shafer 1940:61). The habitats associated with river valleys and old drainage channels are defined by Coupland and Rowe (1969) as Valley complex. In addition, a large number of edible plant species (Shay 1980) would also have been available as a subsistence resource.

The aspen parkland zone located between the boreal forest and the grasslands (Strong and Leggat 1981:2), is characterized by groves of aspen trees (*Populus tremuloides*) dotted among the rough fescue (*Festuca scabrella*) grasses. These groves were reported to have formed at least 15 percent of the ground cover and similar woodlands extend along the river valleys in the grasslands.

The grasslands would have supported bison (*Bison bison*), antelope (*Antilocapra americana*), mule deer (*Odocoileus hemionus*), Jackrabbit (*Lepus townsendii*), coyote (*Canis latrans*), and the plains grizzly (*Ursus horribilis*) (Shay 1980). The smaller fauna are snowshoe hare (*Lepus americanus*), porcupine (*Erethizon dorsatum*), beaver (*Castor canadensis*) and muskrat (*Ondatra zibethicus*) (Shay 1980). This environment also provides an Ideal habitat for a wider range of smaller rodents and carnivores.

The pre-contact availability of mammalian subsistence resources located within the transitional parkland ecotone produced a wide diversity of animals. The resources would have included moose (*Alces alces*), wapiti (*Cervus canadensis*), black bear (*Ursus* sp.), gray wolf (*Canis lupus*), Mule deer (*Odocoileus Hemionus*) bobcat (*lynx rufus.*), beaver (*Castor canadensis*), muskrat (*Ondatra zibethicus*), snowshoe hare (*Lepus americana*), and a wide range of small rodents and waterfowl (Shay 1980).

### **1.7 Climate on the Grasslands**

Climatic conditions on the Northern Plains during the Besant-Sonota period are thoughtnot to have been much different from the present conditions. Climate has been thought to be an influencing

factor in culture change, as Gregg (1994:72) states, changes in cultural complexity and human population density may have correlated with times of xeric and mesic climatic regimes in the late pre-contact history of the entire Northern Plains. He believes that there was a peak of cultural development about two thousand years ago when the mesic conditions of the late Sub-Atlantic climatic episode prevailed and during the more arid Scandic episodes, there are fewer occupations sites on the northeastern plains. He states that with less rainfall, the overall biomass and human carrying capacity of the subarea would have been reduced but that no occupational hiatus occurred.

Climate at this time, according to Greiser (1994 :35 ), consisted of great seasonal extremes, low precipitation and short growing seasons. Through time, these conditions were thought not to have been consistent in the region and that long drought episodes would have had adverse impacts on bison populations. It is believed that droughts would have occurred during the Atlantic climatic episode (ca. 6500-2730 B.C.) and the Scandic episode (ca. A.D. 280-870). Cool moist periods (Greiser 1994 :35 ) were seen as conducive to bison proliferation, such as during the "Little Ice Age," referred to as the Neo-Boreal climatic episode (ca. A.D. 1550-1850). However, the complex ramifications of climatic change and stress on bison populations are not yet understood and Greiser (1994) states that much remains to be learned not only on past climates but how climates may have affected game populations and the hunting populations as well.

In a brief sketch of the overall regional weather conditions on the Canadian Plains (Potter 1965; Longley 1972; Strong and Leggat 1981, Vickers 1994), all snow melts by the end of April with the exception of the occasional spring snow storms. Frost still possibly occurs until early June. Precipitation is low in March and then rises through to June. Temperatures during the spring rise quickly. Summer is during June to August and is very short. The greatest precipitation period in the parklands is during July, the hottest summer month, with temperatures ranging on average from 19° C to an extreme of 41 ° C (Ellis and Shafer 1940:16). The average annual precipitation is 35.6 cm, with 22.9 cm falling from May through to September (Ellis and Shafer 1940:16). The Rocky Mountains prevent the eastward flow of moisture from the Pacific Ocean; therefore, precipitation results from cyclonic storms when cold dry air from the north interacts with warm moist air from the south (Ellis and Shafer 1940:16).

Fall includes September, October and into November when the ground starts to get covered in snow. Very little precipitation occurs during this period. The winter months are December, January and February (Longley 1972; Strong and Leggat 1981, Vickers 1994). By the beginning of December the ground is covered in snow, the lakes are frozen solid and occasional blizzards occur. Winter temperatures (Ellis and Shafer 1940:16) for this region range from 0° C to an extreme of -46° C with the mean temperature during January of -14° C.

## **1.8 Overview of Chapters**

The following chapter discusses the definition and development of Besant-Sonota as an archaeological culture. This includes some of the terminological problems that have been encountered in the available literature. This section also covers the temporal and spatial parameters of the archaeological culture being studied.

Chapter Three introduces the technocomplex of the cultural phase under study. Topics discussed cover the subsistence and procurement strategies, lithic technology, dwellings, burials and pottery. These topics are what defines the culture. The last item discussed is the Besant-Sonota pottery tradition.

Chapter Four consists of discussions of the excavations that were undertaken at Besant-Sonota sites. This chapter is an overview of the sites excavated in Manitoba. The primary objective is to acquire a complete description of the pottery that was recovered from the sites during the excavations. Also included are a number of sites that either had stratigraphic problems, very small sample sizes or were not systematically-excavated.

Chapter Five discusses the Besant-Sonota pottery bearing sites found in both Saskatchewan and Alberta. Each site is discussed, with a detailed assessment of the pottery recovered from the excavations. Briefly discussed are sites less significant or sites that are not part of the research due to the method of recovery utilized at such sites. In the conclusion of this chapter, there will be a discussion of the assessment of the pottery under study.

Chapter Six discusses the sites containing Besant-Sonota pottery in the northern United States, primarily in the Dakotas. This chapter is more of a synopsis of the sites. For each site identified,

the pottery recovered is considered in detail. Included in this chapter are less significant recoveries that will be briefly discussed. The chapter ends with a discussion of the pottery with comparisons made with the Canadian specimens.

Discussed in Chapter Seven are coeval Woodland wares and their possible influence and similarities to Besant-Sonota wares. Also discussed is the classification of Besant-Sonota pottery, as well as some of the interpretations concluded from the study such as ideas and theories previously developed about Besant-Sonota, along with the new theories that have developed as a result of this research.

## **2.0 Background on the Besant-Sonota Culture**

### **2.1 Introduction**

In the attempts to solve the mysteries surrounding the Besant-Sonota phase on the Northern Plains, archaeologists have developed a number of hypotheses in order to define the development and origin of the culture being studied. This process has been achieved through the extensive analysis of the material culture from systematically-excavated sites in both Canada and the United States. The results have produced a number of taxonomic and classificatory approaches. It has also created contention among archaeologists and has caused some confusion in further attempts to define the culture.

The present understanding of Besant has derived primarily from the analysis of the projectile point morphology. In the past, minimal consideration was given to other cultural indicators such as pottery. With the present archaeological data available, a subdivision is known to exist within the Besant phase called the Sonota complex by Neuman (1975). Most Plains archaeologists see Sonota as a regional segment of the larger Besant phase. It is for this reason that the author has decided to use the term Besant-Sonota to identify the study group as one whole entity.

The temporal and spatial distribution of Besant-Sonota is also of prime importance in the overall assessment of the culture. The people who produced the Besant-Sonota culture left behind many clues in their material culture that attest to their ability to survive and prosper on the Northern Plains. The evidence revealed in the

analysis of their cultural materials reveals them as one of the unique cultural groups in pre-contact times on the Northern Plains.

## **2.2 Taxonomic Systems and Besant-Sonota: An Overview**

Archaeologists are renowned for categorizing, classifying and compartmentalizing their materials. This section will examine some of the terms that have been applied in the identification of the Besant-Sonota culture in both a chronological and classificatory perspective. The terms used give definition and description to the Besant-Sonota culture. In the attempts to fit Besant-Sonota into an appropriate taxon, selection becomes difficult.

There are a number of taxonomic systems proposed in order to systematize the temporal and spatial contexts and place pre-contact archaeological assemblages (such as the study group), into a schema (Hannus 1994:179). These taxonomic systems have been found to also be regionally based as archaeologists have developed their own classificatory systems to apply to their particular regions of study. Because of these classificatory and terminological problems, there are differing views of Sonota and Besant.

Ramsay (1991) stated that the terminology used in the classifications has been made on mistaken generalities. The use of the terminology raises questions such as in the case of separating Sonota from Besant. Ramsay (1991) questions on what basis or taxon does it become valid to separate Besant and Sonota. She found the criteria to be conflicting, overlapping and unresolved.

In the western region of the Northern Plains, the earliest taxon that was utilized in describing Besant-Sonota was initially introduced



by W. T. Mulloy (1958). He proposed a four-period system consisting of the Early Prehistoric, Middle Prehistoric (including Early and Late), Late Prehistoric and Historic Periods. Mulloy categorized projectile points stylistically within each marked horizon or period (Hannus 1994:178). This was accomplished by the recorded frequency of occurrence of point styles found in sites during each period. Reeves (1970b, 1983:36) followed Mulloy's original formulation because it defined, in detail, horizon styles on a broad temporal basis. He defined phases within traditions that will be discussed in more detail later. Dyck (1983:110 ) renamed Mulloy's periods using the terms Late Plains Indian, Middle Plains Indian and early Plains Indian and placed the Besant Phase within the "Late Plains Indian Period."

Turning to the Northeastern Plains, the term "Woodland" has been commonly applied primarily to Sonota. Specifically, "The Woodland Period" includes a widespread series of archaeological cultures found in the eastern United States (Syms 1977:73). The Woodland period has also been segregated into three parts, the Early, Middle and Late Woodland periods. The concept of the "Early Woodland Stage " developed from research in the Eastern Woodlands of North America with a distribution that was primarily in the eastern forests south of the Great Lakes, with the Mississippi River forming a boundary to the west (Syms 1977:74). The estimated temporal span of the "Early Woodland period" was from 1000 to 200-100 B.C. (Syms 1977:74). According to most archaeologists, the "Early Woodland period" saw the emergence of pottery, moundbuilding, agriculture and the increased use of special raw materials from various parts of the continent. The pottery from this

early period is described as rarely decorated, with the outside surfaces typically covered with vertical impressions from a cord-wrapped paddle with punctates along the middle of a flat, squared lip (Wilford 1955).

Horticultural developments during the "Early Woodland period" provided the foundation for more intensive horticultural practices in the "Middle Woodland period" (Syms 1977:76). The presence of ceramics, coupled with the evidence of a shift to plant food, reflected adaptive strategies due to demographic pressures on the environmental carrying capacity (Syms 1977:76). The increased density of sites was thought to reflect a pronounced population increase. Increased numbers of complexes which represented probable factionalism, and greater numbers of new ethnic groups. Syms (1977) proposed that changes in demographic patterns led to increased regionalism in technology by the latter part of the Early Woodland period.

Syms (1977:79) pointed out that the "Middle Woodland time period" occurred at 200 B.C. to A.D. 700. This period was stated to also extend to approximately A.D.1100 which was referred to by eastern archaeologists as the northern tier Middle Woodland. This period could not be viewed as a static cluster of technological traits. It is believed to have resulted in population growth based on incipient horticulture of the preceding stage and intensification during the present stage. He stated that it was characterized by the emergence of population clusters into chiefdoms with the concomitant centralization of control (Syms 1977:80). This view also included the organization of vast trade networks for the

redistribution of non-local resources. The "Late Woodland period" is omitted here as it does not apply to the cultural group and time period under study.

Besant-Sonota has most often been associated with the "The Plains Woodland Tradition". The "Plains Woodland tradition" is a term that evolved out of the "Woodland period" terminology. Ann Johnson (1977:36) uses the term Plains Woodland culture to identify a Besant-Sonota site with pottery. She has pointed out that there are some conceptual problems in the usage of Woodland in Besant. Part of the problem she states, comes from using different criteria for identification in different areas. An example pointed out is the use of cord-marked pottery as a prime characteristic to identify Woodland sites. She concludes that problems stem from archaeologists working in essentially geographical and ideological isolation from one another. The classification of Besant on the basis of the points and Woodland on pottery was seen as a paradox. Besant was initially thought to have no pottery. The clarification of the cultural relationships was found to be difficult because of biased data and uneven reporting based on mistaken beliefs on Woodland because it was far more complex than what had been thought (Johnson 1977:36). Gregg (1994) has noted that the concept of the "Plains Woodland Tradition" has not been fully developed in the field of Northern Plains archaeology.

Schlesier (1994:336), in his interpretations of archaeological cultures from an ethnographic perspective, sees the concept of "Plains Woodland" as a misnomer which precludes the dynamics of prehistory, stating that plains cultures were being measured with a

measuring rod from another region. He perceives the necessity of studying and discussing Plains prehistory on its own and not on borrowed terms. It was, however during the "Middle Woodland period" that Besant-Sonota reached its pinnacle.

Gregg (1994:74) stated that the debate over Besant and Sonota and the differences between them related to terminology whether these entities were considered as archaeological complexes or regional phases or some sort of expansive tradition. The use of "phase" or "phases" originally derived from Willey and Phillips (1958:22). They define the phase as follows:

An archaeological unit possesses traits sufficiently characteristic to distinguish it from all other units similarly conceived, whether of the same or other cultures or civilizations, spatially limited to the order of magnitude of a locality or region and chronologically limited to a relatively brief time.

Willey and Phillips viewed their phases as portions of cultural traditions. Willey and Phillips's (1958:22) definition stated that a tradition was a persistent configuration in a cultural system which links phases through time. Thus, the cultural tradition was seen as representing continuity in a variety of expressions such as artifacts, technology, settlement and subsistence. Thus, Reeves (1983:39) recognized the *Napikwan* tradition to which the Besant phases belonged. Reeves (1983:39) definition of a phase did not really correlate with a locality, region or area; instead he used the term "phase" to justify the characteristic traits of projectile points and conoidal pottery. The redefinition of a "phase" by Reeves, according to Ramsay (1991:88), made it more readily possible to view the relationship between Besant and Sonota.

In Besant lithic collections, the term "series" has also been applied in characterizing more than one Besant projectile point type (Dyck and Morlan 1995:537), as opposed to describing the generalities of the cultural phase. The projectile points types will be discussed further in the next chapter.

Sonota and Besant can actually be viewed as variations of the same phase (Gregg 1994:74). Reeves (1970a) described Sonota and Besant together, and Johnson (1977) saw Besant as a Woodland complex. The close relationship between Neuman's (1975) Sonota complex and Reeve's (1970b) Besant phase has been generally accepted.

"Complex" and "phase" have been the most common classificatory terms used to describe and define the Besant-Sonota culture. Because of this popularity, the author has selected to use the term phase in reference to the Besant-Sonota culture. When the Besant phase was initially identified, it fit Mulloy's system. With the recognition of the Sonota subphase and its association with burial mounds and ceramics, the Woodland taxon was applied, creating somewhat of a dilemma. Because ceramics are the focus of this study, the use of the Woodland taxonomy will also be utilized. Therefore, I will regard Besant-Sonota as a phase within the Middle Woodland Period. Most plains archaeologists prefer to use the late Prehistoric period, a term which I don't feel comfortable with.

### **2.3 The Interpretation of Besant**

The emergence or development of Besant on the Northern Plains has resulted in much debate in the field of archaeology.

Archaeologists have developed a number of hypotheses regarding the possible origin of the culture. This section will assess the present understanding and interpretation of the Besant (Sonota) origins.

Without recovering diagnostic projectile points, many Plains archaeologists are hesitant to ascribe a cultural affiliation to any of their findings. As a result, the picture of past lifeways becomes skewed because it necessitates at least one diagnostic projectile point to render the site classifiable (Greiser 1994:34). The lithic technology, primarily projectile points, found *in situ* in systematically-excavated sites has been the major diagnostic artifact in the identification of the cultures under study with very little consideration given to the ceramic technology. However, more archaeologists are beginning to turn to ceramics as an archaeological cultural indicator.

Besant as a cultural phase has been distinguished by the characteristic atlatl and arrow projectile points found in archaeological excavations during the middle of this century. Boyd N. Wettlaufer (1955) was the first archaeologist to describe Besant "dog eared" atlatl projectile points recovered from the excavation of the Mortlach site located in south-central Saskatchewan. In addition to his lithic finds, ceramic sherds were also recovered, but were dismissed as being intrusive (Wettlaufer 1955).

T. F. Kehoe (1966:838) was the first to give a detailed typological description of the so called Besant points. He proposed a number of morphological varieties of the projectile points such as the Coteau and MacLean styles. The Samantha side-notch point was seen

as representing bow and arrow technology associated with Besant (Kehoe 1966:838). The Samantha points were essentially a smaller version of the atlatl points and were sometimes made on a flake with little retouch (Ramsay 1991:81). However, problems developed because of small sample sizes and very few well defined occupations were found bearing the points. Subsequently the terminology of Samantha point was seldom used by archaeologists (Vickers 1994:9).

Perceptions are, however, changing in regard to the Besant projectile point and this is due to more recent in depth examinations and analyses. In the most current description of the morphological characteristics of Besant points, Dyck and Morlan (1995:53) introduced two new named types. They perceive them to be the initial most enduring and prominent of several types characterizing the Besant series. The types mentioned are the Outlook Side-Notch, Sandy Creek and Bratton. It is also noteworthy that they suggest that the earliest known Besant points appear to be arrow points (Dyck and Morlan 1995:53). As a result, there are some reinterpretations regarding point type as well as the function. This also raises the question of which weapon was being used first, the bow and arrow or the atlatl or whether they were both in use. These projectile points will be described on more detail later in the chapter.

In summary, a number of archaeologists have attempted to sub-divide the Besant projectile point through functional and stylistic differences. This has derived from taxonomy made on basal morphology. Hjermsstad (1996:49) has pointed out that divisions have been made on basal morphology by Forbis (1962), Kehoe (1974) Dyck and Morlan (1995), by material type by Neuman (1975)

and Syms (1977) and by length and width by Ramsay (1991). Hjermsstad (1996) points out that if the variation in morphology is proven to be correct, then there is a need to further redefine the representation of Besant.

In addition to projectile point-based interpretations of Besant, the Besant appearance on the Northern Plains is also looked upon as an extension of the general Woodland life way that flourished throughout the American midwest to the east and southeast (Kordecki et al. 1993). Greiser (1994:36) states that most researchers concurred that Besant originated in the eastern or northern Woodlands. It was pointed out that this was indicated in the presence of side-notched dart points replacing corner-notched points and an accompanying suite of definitive characteristics that distinguished Besant from Pelican Lake.

Reeves (1983) pointed out the possibility of a Besant relationship to Sandy Creek as originally defined by Wettlaufer (1955). This was considered to be the case in both Alberta (Head-Smashed-In site) and Saskatchewan (Sjovold, Mortlach, Walter Felt sites) bridging the time between late Oxbow and Besant (Dyck 1983:108, Reeves 1983:183). The Sandy Creek complex was considered a precursor to the Besant phase and was characterized by small shallow side notched points and was also seen as persisting in the Canadian parklands during the Pelican Lake period (Reeves 1983:14, Hannus 1994:184).

Davis and Stallcop (1966:17) support an indigenous development; however, viewing Besant as developing from the Pelican Lake phase. To support this theory, Nicholson (1987b:41)



stated that it was apparent that the Besant-Sonota subsistence strategy, based upon a complex pattern of communal bison procurement, evolved independently from either of the proposed antecedents on the plains or in the Eastern Woodlands. Nicholson (1987b:41) pointed out the fact that it may have been interaction, yet undemonstrated in the archaeological record, with the contemporaneous Pelican Lake and Avonlea complexes which initiated the patterns which culminated in the highly sophisticated procurement strategy described by Frison (1978).

Problems, however, arise because relatively few sites were found demonstrating the transition from Sandy Creek to Besant and these transformations have remained unclear (Dyck 1983:108, Vickers 1994:11). The details of the transformation of Oxbow to Besant still remain ambiguous (Vickers 1994:13). However, Oxbow points or "Remnant Oxbow" points are seen as having similarities with points of the Sandy Creek type (Dyck and Morlan 1995:435). In addition, Hannus (1994:184) points out that Morlan's (1988) cumulative histograms of radiocarbon dates for southern Canada, supported the argument that Sandy Creek did develop into Besant. Dyck and Morlan (1995:435) propose a rejection of Sandy Creek as a separate phase because they consider it to be merely a name of the projectile point type, one of three belonging to the Besant series. However, Nicholson (1987b:41) points out the fact that neither Oxbow or Sandy Creek show evidence of the procurement systems which were characteristic of Besant-Sonota.

Reeves (1970) defined the *Tunaxa* tradition which consisted of a number of phases or complexes such as Pelican Lake and the bow

hunting Avonlea from the west. The Oxbow, Sandy Creek, Besant and the Old Women's phases were considered as sequential phases in the *Napikwan* tradition. The *Napikwan* tradition made its appearance on the Plains relatively coeval with the *Tunaxa* cultural tradition as it was undergoing change and divergence. The *Tunaxa* is a Kutenai term that refers to their Plains division in earlier times and *Napikwan* is a Blackfoot term that refers to the white people of the nineteenth century (Schlesier 1994:310).

The Besant phase, as part of the *Napikwan* tradition, represented a nomadic hunting-gathering culture with distinctive lithic artifact assemblages and regional manifestations in the east (Dakotas) which include ceramics, burial mounds and habitation structures. *Napikwan* was seen as displacing *Tunaxa* in the Missouri Basin (Reeves 1983:185). Reeves (1983) suggested that since approximately 500 B.C. *Napikwan* was a resident Plains tradition on the northeastern periphery (Reeves 1983).

Reeves (1970a, 1983) initially addressed the possibilities that Besant may have been an intrusive cultural tradition from the Eastern Woodlands and/or from the Northern Boreal Forest. At the time, it was noted that older dates were common on the eastern edges of the Northern Plains (Reeves 1983). Reeves (1983:141) presented two general hypothesis of Besant origins includes:

- (1) The Besant phase is a sequent phase in the *TUNAXA* cultural tradition and it either (A) develops from the Pelican Lake phase or (B) from one of the regional sub phases.
- (2) The Besant phase is part of a cultural tradition unrelated to *TUNAXA* which is either (A) a plains adapted tradition or (b) is an intrusive cultural tradition from some other area.

He states that one must, in evaluating 1A, 1B, 2A, and some alternatives in 2B, consider only the cultural systems that cannot be introduced into an indigenous plains tradition by way of contact with Middle Woodland cultures. This was to specifically include ceramics, habitation structures and the burial mound patterns (Reeves 1983:141)

Reeves (1983) proposed that the earlier McKean and Hanna phases were also encompassed in the "*Tunaxa* " tradition, but predated the temporal scope of his 1970 work. The *Tunaxa* tradition as seen by Reeves (1970b,1983), spanned at least two and one-half millennia, with the Pelican Lake phase being represented by a number of locally-adapted cultures which in time were replaced in certain areas by Avonlea. Reeves (1983:184) stated that in areas ecologically unsuited for stable horticulture at this time level, the *Tunaxa* cultural tradition continued as a basic hunting gathering adaptation into the Avonlea phase in the bison-rich Northwestern Plains.

Reeves (1970b) postulated that a series of subcultures evolved to replace the Pelican Lake phase in the Missouri River region of South and North Dakota. These are represented by Valley/Loseke and Keith phases which were ceramic producing, semipermanent village dwellers. This tradition was defined as the "Plains horticultural tradition" by Hannus (1994:178). This emerging tradition in the Northern Plains was seen as the result of a diffusion of Middle Woodland traits (ideas) from eastern North America. The Plains horticultural tradition will be discussed later.

## **2.4 The Interpretaton of Sonota**

The question of relationships between Sonota and Besant is important to the theoretical bases behind the definition of the culture. The Sonota complex was initially identified by Robert W. Neuman (1975) while excavating a series of burial mounds along the Missouri River in North and South Dakota. The Stelzer, Swift Bird, Grover Hand, Arpan and Boundary Mound Sites provided the basis of his definitions. Neuman (1975:84, 96) clearly demonstrated that a large number of projectile points from the single Sonota campsite (Stelzer site) and the burial mounds closely resembled those of the widespread Northern Plains Besant culture. He concluded that Besant sites were contemporaneous with and culturally connected to the Sonota complex. Therefore, he felt that Sonota could be regarded as a regional expression of the Besant culture and to represent the heartland of Besant (Neuman 1975). Neuman (1975) stated that "the Sonota Complex was an archaeological expression representing a regional segment of a cultural tradition which effectively exploited the Plains-Riverine environment of north-central North America".

Carrying on with Neuman's approach, Reeves (1983:10) subsequently defined the Sonota complex as the Middle Missouri expression of the Besant cultural phase. Many of the artifacts and features found in association with the complex were found to be similar to those in sites located in Alberta, Saskatchewan and Montana. In fact, Reeves (1983) did to define the Besant Phase Middle Missouri variant and mound burial pattern as Neuman (1967) utilized the same sites to define the Sonota complex . Reeves

concluded that the primary difference between the two was that one had a burial mound complex.

According to Reeves (1983:11), Syms (1977) confounded the issue by establishing an artificial separation between Besant and Sonota. Syms (1977:92 ) extended Neuman's (1975) Sonota concept to include certain more northerly Besant sites on the basis of point styles and quantities of Knife River flint and ceramics. Reeves (1983:140-141) outlined ten characteristics in order to aid in the identification of Besant:

- (1) Low frequency of unnotched points (usually one type)
- (2) Besant Side-Notched (atlatl) and Samantha Side-Notched (arrow) projectile points. No stemmed forms and few Pelican Lake Corner-Notched points. Flaked points are common.
- (3) Few discrete types of bifaces with modified hafting elements.
- (4) High frequency of asymmetric ovate bifaces
- (5) High frequency of small dorsally-finished end-scrapers.
- (6) Distinctive drill types-pentagonal and triangular.
- (7) Absence of unifacial flakes, domed side scrapers, and point unifaces; few bifacial choppers
- (8) Rare and localized cord-marks, bosses, and/or punctated conoidal pottery vessels
- (9) Presence of excavated basin shaped earth-filled hearths but absence excavated basin-or bucket-shaped rock-filled hearths. Surface hearths are common. Presence of cache pits, house structures (two sites), and bone uprights.
- (10) Secondary burials, usually accompanied by many grave goods, in a central subfloor log covered tomb, under an earth mound.

Ramsay (1991:87) pointed out that this list of characteristic traits differed from Reeves's (1970a:149-150) original by recognizing the presence of the Samantha points, the house structures and including the Sonota Complex burials in Reeves

introduction to the 1983 publication and his dissertation. This update, according to Ramsay (1991:87), was due to the criticism received from Syms (1977). Syms argued that Reeves did not really define a Besant phase, but rather a Besant horizon since his criterion for identification was the Besant Side-notch and Samantha Side-notch points (Syms 1977:91). Syms suggested that Reeves included too many different types of points which were found in too wide a geographic area to be considered a phase (Ramsay 1991:87).

By ignoring Reeve's terminology, Syms (1977:90) reassigned a number of previously known sites to the Sonota Complex. He did not feel these sites were Besant because they shared characteristics with that of Neuman's Sonota complex. He stated that lithic materials from Besant sites were quite different as there was a lower occurrence of Knife River flint and the projectile points were shorter and more squat with shallow notches (Syms 1977:92).

Syms (1977:92) distinguished Besant as a separate complex combined with Neuman's Sonota at the level of a composite or configuration claiming that the differences were in projectile point morphology because of tool categories and the choices available in raw materials. Syms (1977:92) concluded that the differences within Besant were partially characterized by variations in projectile point style and the frequency of Knife River flint and, therefore, included certain Alberta, Saskatchewan and Montana Besant sites in with the Sonota Complex, raising considerable controversy. Reeves (1983:11) took particular exception to this separation and found no quantitative and qualitative differences. Reeves (1983:13) argued

that the Sonota Complex was the Besant Burial Mound Complex of the Middle Missouri.

Ramsay (1991) reviewed the definitions of the Besant and Sonota culture as developed in the literature. These definitions were found to be confusing, largely because various authors were comparing different site types from different regions, and were using ambiguous definitions, especially in projectile point morphology. In the reporting on the Melhagan site, Ramsay (1991) questions the validity of the separation of Besant and Sonota and the taxonomic level on which the separation should be accomplished.

To summarize the deliberations of Reeves and Syms, Ramsay (1991) stated that:

Both Reeves (1983:12) and Syms (1977:92) have rightly lamented over the lack of proper systematic quantitative analysis of the variations with the phase. It is also apparent that Reeves and Syms did not fully consider that other factors may actually account for any "definition" between the so-called Besant and Sonota projectile point types (Ramsay 1991:90).

In addition, Ramsay (1991:89 ) pointed out that at a glance over Neuman's (1975:153) illustrations, over half of the points could have been classified as Besant.

According to Ramsay (1991), Syms therefore created an artificial separation between Besant and Sonota, and his conclusions were reached through his examination of report illustrations, and not on quantitative analysis. However, Reeves (1983:12) claimed that his own analysis was based on a 'hands-on' examination of all collections. Vickers further summarizes the contentions of both Reeves and Syms by stating the following:

Another problem that inhibits a scientific prehistory concerns not our models, but our data. ....Curiously, most of us consider this a valid point-data description in the archaeological literature of the Northern Plains is so inconsistent that an impression arrived at by handling the collections may have more validity than one based on examining reports (Vickers 1994:32).

One of Ramsay's (1991:90) objectives was to look at possible statistical separations reflecting a distinct group through detailed analysis of projectile point types. Ramsay suggested that attributes as well as other factors such as the frequency and location of use wear and reworking needed to be reassessed. She pointed out the fact that there is no research to date that has involved an intensive intersite statistical comparison of Besant and Sonota assemblages and that the volume of work involved would be overwhelming.

Ramsay was faced with a dilemma when assigning a cultural affiliation to the Melhagen site. She stated that Reeves' traits for Besant were only useful in distinguishing Besant characteristics from Sonota and did not feel it was adequately defined. She concluded that there was little reason to separate Besant on the basis of projectile point assemblage characteristics. An important point that she makes is that the Melhagen site was identified as having a Besant component because of its precedence in the terminology (Ramsay 1991:151). Ramsay (1991) also found that both Reeves (1983:12) and Syms (1977:92) rightly lamented over the lack of proper systematic quantitative analysis of the variation within the phase.

As Reeves (1983:11) had originally stated, Besant had terminological precedent in the literature over Sonota (Wettlaufer



1955; 1960; Forbis 1962; Davis and Stallcop 1966; Gruhn 1971), and the use of Sonota should be restricted to the burial mound complex. Dyck (1983) also perceived Sonota as separate from Besant by its mortuary mounds. However, he noted the two separately identified cultures share the same time period and the Sonota tool kits were essentially identical to Besant elsewhere on the Northern Plains and so he did not see the justification of creating another complex (Dyck 1983:114). Sonota was seen as nothing more than a mortuary expression of Besant (Dyck 1983:115, Greiser 1994:37). The mound burials were a feature of Sonota and perhaps reflected Besant groups who had a more settled lifeway afforded by efficient hunting and gathering subsistence strategies (Winham and Lueck 1994:152).

Despite the postulated differences, the author supports and agrees with the fact that Sonota should be considered a subgroup related to Besant and should not be considered as a separate cultural entity. Much of the debate over Besant and Sonota differences relates to terminology and whether they are considered as distinct complexes or as regional variations of the same phase (Gregg 1994:74).

The author agrees with Ramsay (1991:90) that attributes and evidence of other factors be examined. For the author this would primarily be in the area of ceramics in contrast to the lithic tools such as projectile points. When analyzing the projectile points, Ramsay found that Besant and Sonota projectile points seemed to share a number of characteristics in technology and features and found that no one "quantitatively" distinguished them despite the arguments between Reeves (1983) and Syms (1977).

The problems found within the identification of the cultural phase under study have raised many questions and have been a contentious topic in the field of Plains archaeology. It is clear that the problems concerning Besant and Sonota have not been fully resolved and there are still many unanswered questions. The evidence of Woodland pottery, high frequencies of Knife River flint, and platform burial mounds that are associated with the Sonota subphase of the Middle Missouri trench demonstrates a difference from Besant which has been demonstrated through the detailed analysis of projectile point styles, endscraper styles and the presence of ceramics in some sites. However, as the Sonota or Besant expands further onto the Northwestern Plains, it loses some of the so called subphase characteristics. This is one reason the author has chosen to use Besant-Sonota.

## **2.5 The Temporal and Spatial Conundrum**

The original appearance of Besant was placed around 2500 years ago (Reeves 1970a :89; 92, Deaver and Deaver 1988:112-114). The total temporal span for the Besant phase has been estimated at ca. 2,500 B.P. to ca. 1,200 B.P. (Reeves 1983:80). Archaeologists such as Kehoe (1974:104) have stated that the Besant points spanned from 2000 to 1600 B.P. transforming into the Samantha point and by about 1300 B.P. they became the Prairie Side-notch type. Vickers (1994:13,19) saw Besant as an indigenous group on the Northwestern Plains about 2,200 years ago and stated that Besant disappeared from the Alberta and Saskatchewan plains by 1100 B.P. at the latest. Despite some differences in ideas about the temporal span of Besant-

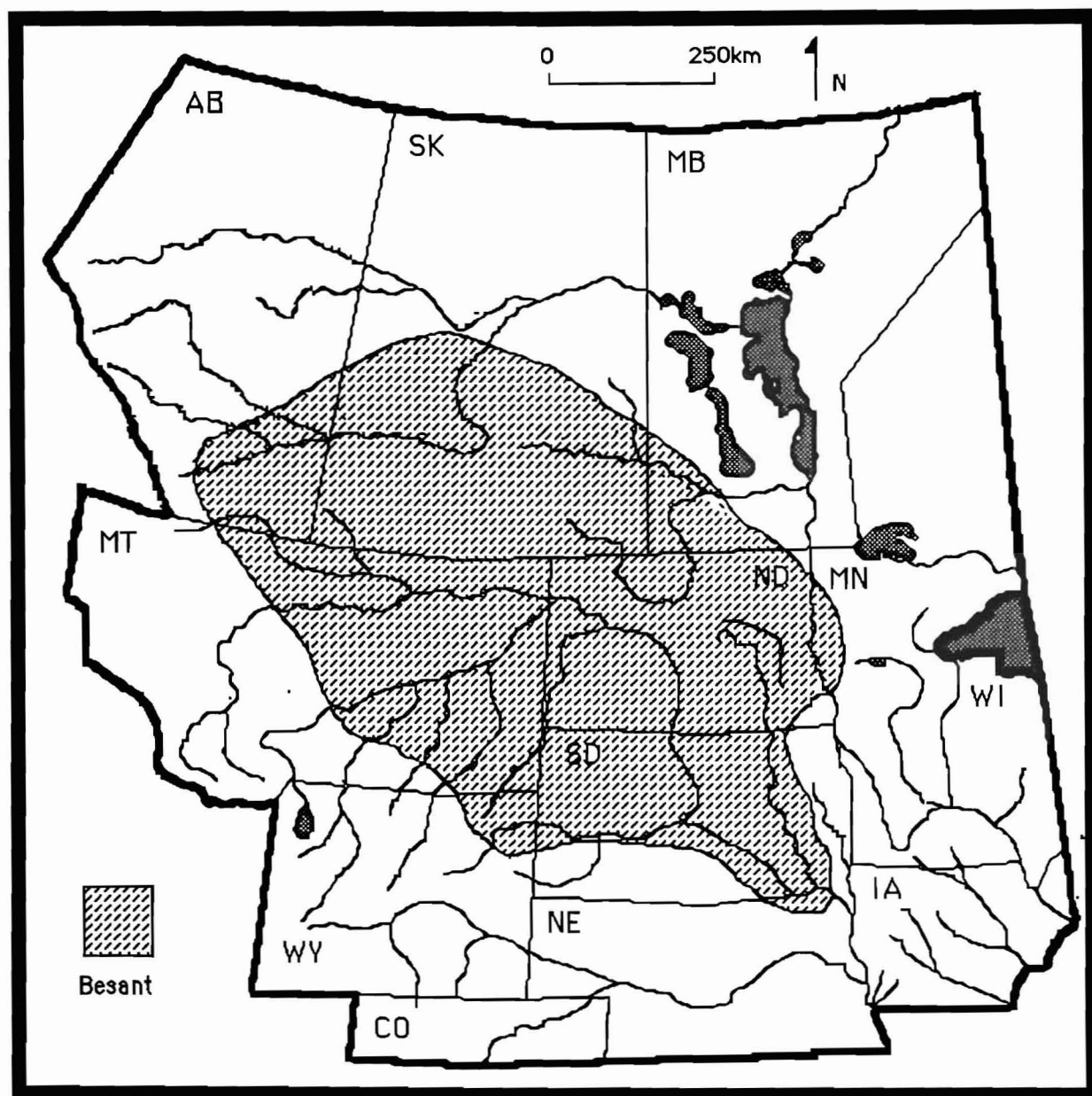
Sonota, most archaeologists concur that the Besant(Sonota) phase burst into florescence on the Canadian Plains approximately 2000 B.P. (Reeves 1970b, 1983; Neuman 1975, Syms 1977; Vickers 1984; Gregg 1984,; Gresier 1994:37, Hannus 1994:184). Table 2.1 is a sample of Besant-Sonota radiocarbon dates of key sites found within the study region.

**Table 2.1:** A sample of radiocarbon dates of some key kill and pottery-bearing sites demonstrating the temporal span and range of Besant-Sonota (information from Reeves 1983, Ramsay 1991, Hjermsstad 1996).

<b>Besant-Sonota Sites</b>	<b>Lab. No.</b>	<b>Radiocarbon Dates</b>
Bounary Mound	1-414	2250 +/- 125 B.P.
Head-Smashed-In	GX-1220	1516 +/- 90 B.P.
Fitzgerald	Beta 69005	1490 +/- 90 B.P.
	S-3546	1270 +/- 140 B.P.
	Beta 69004	1340 +/- 60 B.P.
	S-3547	1160 +/- 170 B.P.
Melhagen	S-2855	1905 +/- 110 B.P.
	S-2856	1575 +/- 115 B.P.
Mortlach	S-22	1630 +/- 159 B.P.
Naze	225WS 1758	2010 +/- 30 B.P.
Stelzer	Beta 38267	1880 +/- 50 B.P.
	Beta 38266	1600 +/- 60 B.P.

The projectile points found in the region of the Northern Plains occupied by Besant-Sonota have been the dominant factor behind determining the spatial distribution of the culture. However, the distribution of Besant has been found to be difficult to determine because the considerable variability in point forms has never been systematically quantified (Hannus 1994:187). Besant sites have been found to occur along most of the drainage systems on the Northwestern Plains, from the Missouri and Milk Rivers to the

northeastern Souris and Assiniboine Rivers in the Manitoba parklands, the Saskatchewan headwaters, and on the grasslands and foothills of Alberta (Figure 2.1). Besant sites are uncommon in the upper Yellowstone area, but occur further to the south and in the Powder River basin (Greiser 1994:37).



**Figure 2.1:** Map showing the distribution of the Besant-Sonota phase on the Northwestern Plains (modified from Syms 1975:80).

The western edge of the distribution is coincident with the mountain front where a few Besant projectile point specimens have been found in Pelican Lake sites (Vickers 1994:13). The northern limits included the parkland, but few specimens have been found within the boreal forest. Besant projectile points have been identified as far north as Southern Indian Lake and Leaf Rapids in northern Manitoba (Kroker 1990:161).

By about 1500 B.P, Sonota was found in the central and northern regions of the Missouri trench, Besant and Avonlea were in the west, and Laurel was in the prairie-woodland ecotone to the northeast (Gregg 1994:74). The distribution of Besant suggests that the people who produced it were plains/riverine-adapted and appear to have spread westward along major drainages from the eastern woodlands (Greiser 1994).

## **2.6 Discussion and Summary**

There are a number of terminological problems that have been associated with the definitions of Besant and Sonota. The author therefore has elected to use the term Besant-Sonota to identify the archaeological culture under study because of the ambiguities that has been found in previous research. The taxonomy and terminology have been found to be inconsistent and confusing, as Ramsay (1991) stated. One of the reasons for this is that phase definition through projectile point morphology utilizes the Mulloy and the Willey and Phillips system, but when looking at the culture through the ceramics an eastern woodlands system is utilized. Chronologically, there is

consensus that Besant-Sonota emerged approximately 2,000 years ago and lasted on average for about 800 years.

The analyses conducted on the projectile point types have led some archaeologists to consider Besant as a development that emanated from the Northern Plains while others hold the opinion that Besant may have been an intrusive cultural tradition with strong ties to the Eastern Woodlands. Sonota has been identified as having essentially the same stone tool assemblage and hunting methods as Besant. Because of mortuary practices and the use of pottery, Sonota was seen as unique and clearly demonstrated an Eastern Woodland affiliation.

Many archaeologists admit that research regarding Besant-Sonota projectile point morphology needs to be expanded. So far, the projectile point has been a cultural indicator and has aided in defining the temporal and spatial locus of the cultural group. Because of the Sonota affiliation with the Woodlands tradition, pottery therefore has also increasingly become a diagnostic factor.

In summary, it is the general understanding that Besant was an indigenous culture on the Northern Plains by about 200 B.C. and persisted until A.D. 750 or 850 (Reeves 1983:8; Morlan 1988; Vickers 1994:14). By A.D. 200 it was widespread, coinciding with the western mountain front the eastern parklands and the northern boreal forest. Besant was thought to have evolved into more recent archaeological cultures such as the Plains Village and Old Women's phase (late Woodland components) which fell in the A.D. 650 to A.D. 1,000 range in the Dakotas, Montana and in Alberta and by A.D.

1,000 to 1,300, the Old Women's arrow points eventually replaced the Besant styles (Deaver and Deaver 1987:100) .

### **3.0 The Besant-Sonota Technocomplex.**

#### **3.1 Introduction to the Besant-Sonota Technocomplex.**

The details of the technology used by the people of the Sonota subphase and the larger Besant phase have been determined through the analysis of a wide variety of artifacts and cultural features excavated from various sites throughout the Northern Plains. The high frequency of Knife River flint used to manufacture lithic tools, the huge platform burial mounds and the evidence of Woodland ceramics, have been some of the main descriptive factors. This section will describe a number of the technological traits that have aided in further understanding the Besant-Sonota culture.

#### **3.2 The Subsistence and Procurement Strategies**

Although many Besant-Sonota sites are known within the Northern Plains, few have been professionally investigated, and these are generally limited to bison kill or processing sites (Greiser 1994:37). Besant-Sonota was the most widespread of the Plains Woodland cultures on the Northern Plains, and Frison (1978:223) has observed that "Besant was a cultural incursion onto the Northern Plains that brought with it or developed there, the most sophisticated bison procurement method the area had ever seen and it was a cultural climax that was never to be achieved again".

The Besant hunters' strategies involved the construction of highly efficient buffalo corrals, pounds and traps which also utilized the natural topography and consequently could be set up in a wide variety of bison habitats (Reeves 1983:97, Winham and Lueck



1994:152). The location of many Besant components at which archaeological work has been carried out are shown in Figure 3.1.

Five bison pounding sites associated with Besant-Sonota have been well documented on the Northern Plains. They are the Ruby site located in the Powder River Basin in Wyoming (Frison 1971:77-95), the Mel Hagen site (EgNn-1) in the sand hills surrounding the South Saskatchewan River (Ramsay 1991), the Mulbach site (FbPf-100) near Stettler, Alberta (Gruhn 1971), the Richards Kill Site near Killarney in Southern Manitoba (Hlady 1970) and the Fitzgerald site (FnJc-8) in the Moose Woods Sand Hills 15 km southeast of the city of Saskatoon (Hjermstad 1996). The remaining sites are primarily jumps with some domestic sites. Many of these are multi-component sites. Both the jump and pound hunting methods were used right up to the contact period. The jump method was the oldest form of the "buffalo procurement complex" on the Northern Plains (Frison 1978).

Other faunal food sources that supplemented bison were elk, mule deer, antelope, dog/coyote and beaver and fowl (Gregg 1996). Based on the data from the upper James River Valley, domestic dogs were thought to be the most dependable food source prior to the advent of horticulture (Gregg 1996:28). A smashed canid mandible with tooth wear generally associated with domestication practices was recovered at the *Wapiti Sakihtaw* site in south-central Manitoba (Scribe and Nicholson 1994:125). This find suggests that it also may have been a supplementary food source. The gathering of wild plants for most Plains groups through the millennia provided additional food sources that included tubers, roots and berries (Gregg

1987b). A detailed description of the wide variety of plant foods obtained for consumption will be omitted due to its magnitude.

The association of horticulture cannot be substantiated in the archaeological record (Gregg 1983). However, if proven, the planting of maize, beans and squash may not have been the only supplementary horticultural produce. The use of wild rice in the parkland ecotone may have added to the Plains Bison hunters' diet. Syms (1977:17) reports that wild rice used to grow in the Souris valley in the southwestern corner of Manitoba near the United States border prior to the 1930's.

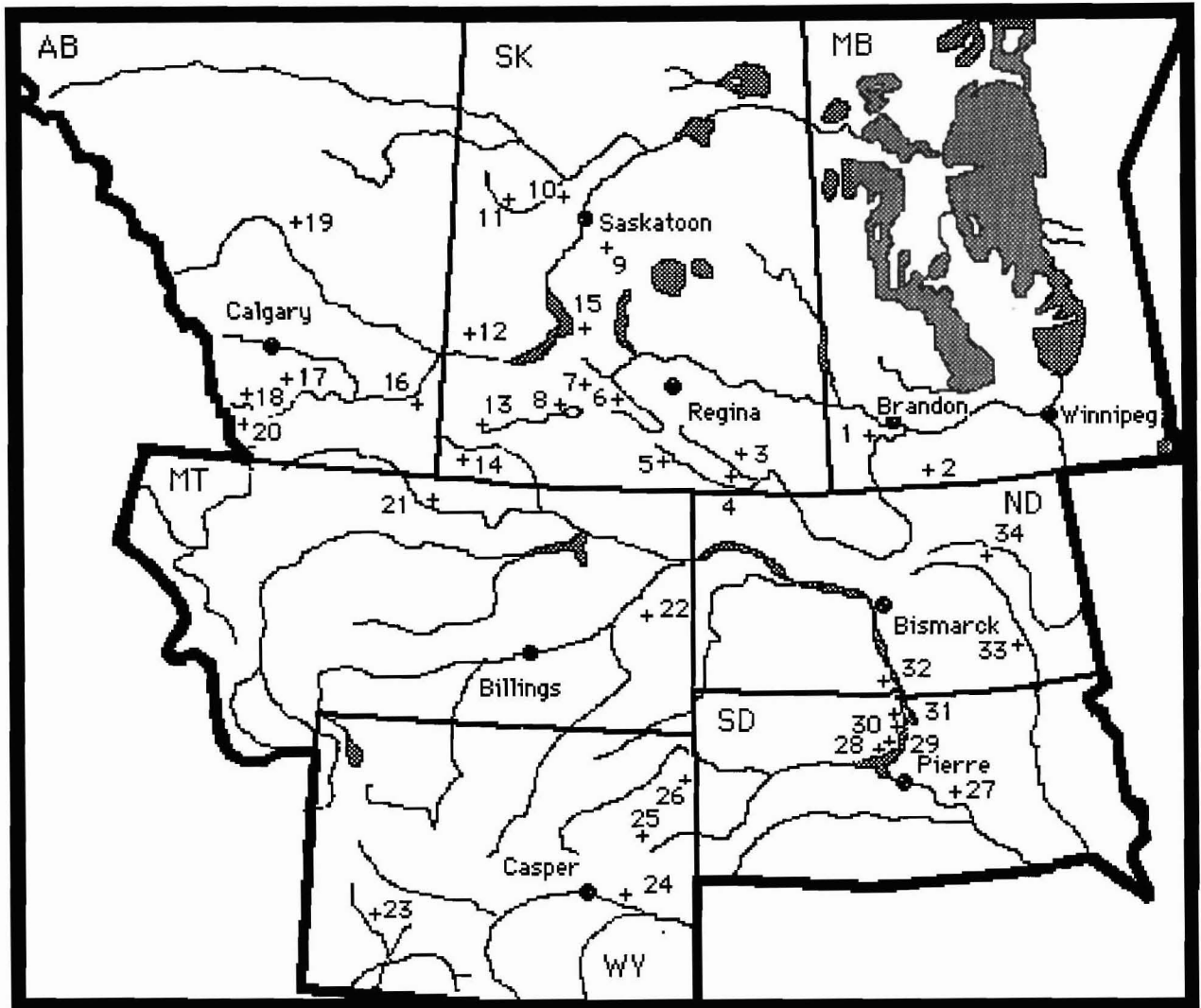
### **3.3 The Lithic Technology and the Transformation of Projectile Points as Applied to the Besant-Sonota Phase.**

The lithic technology utilized by Besant-Sonota consisted of a wide diversity of flaked lithic tools such as projectile points, ovoid, lanceolate and triangular knives, end and side scrapers of various types, drills, gravers and notched and utilized flakes. Pecking and grinding stones such as grooved mauls, hammer stones, milling stones, abrading stones and atlatl weights were formed from materials such as coarse quartzite, catlinite, scoria and hematite (Neuman 1975:91-92).

The extensive use of Knife River flint has been verified in the excavation of a number of related sites associated with the Besant-Sonota culture. The lithic technologies reflect a high usage of Knife River flint. Virtually all tools were made of this material. Reeves (1983:96) for example, points out that in the excavation of the Richards Village kill site, 113 of 117 artifacts were of Knife River

flint. The Muhlbach Besant bison kill site also had 52 of 62 points made from Knife River flint. In addition, at the Fitzgerald site approximately 97% of the projectile points were composed of Knife River flint (Hjermstad 1996:77). Other, less popular, lithic types present in Besant-Sonota lithic tool assemblages include various coloured and banded chalcedonies, fine-grained quartzite, quartz, jasper, chert, petrified wood, moss agate, and obsidian (Neuman 1975, Syms 1977).

Originally, Besant-Sonota projectile points were described by Wettlaufer (1955:44) as having short and broad shallow notches with slightly concave bases which were thinned by striking flakes off the base towards the tip. This practice was stated to be the cause of the slight concavity in the bases creating lugs and tangs at the corners. The subsequent excavation of other sites through the decades shows that the bases were not always concave (Ramsay 1991:81). Reeves (1983) described these points as characterized by squat forms with shallow side-notches and shallow V-shaped bases. Dyck (1983:115) described Besant side-notched points as lanceolate specimens about 30-70 mm long, 19-23 mm wide with an internotch width of 14-16 mm, and with notches that are twice as wide as they are deep. The workmanship was seen as crude to well-controlled with bases often ground (Dyck 1983:115). Sonota projectile points were seen by Neuman (1975:93) as comparable to Besant points and primarily made of Knife River flint. Kehoe's (1966:838) Samantha Side-Notched were also part of the Besant projectile point type. They were seen as arrow tips that resembled a smaller version of the atlatl point, and often made on flakes.



**Figure 3.1:** Sites that contain Besant-Sonota assemblages on the Northern Plains: (1) Mullet, (2) Richard's Kill Site, (3) Ratigan (4) Crane (5) Long Creek, (6) Garratt (7) Mortlach, (8) Walter Felt (9) Fitzgerald, (10) Glendora, (11) Biggar Bone, (12) Elma Thompson, (13) Gull Lake Site, (14) Bakken-Wright, (15) Melhagen, (16) Ross Glen, (17) Old Women's Buffalo Jump, (18) Head-Smashed-In, (19) Muhlbach, (20) Kenney Site, (21) Wahkpa-Chu'gn, (22) Ayers-Frazier Bison Trap, (23) Wardell, (24) Glenrock Buffalo Jump, (25) Ruby, (26) Vore, (27) La Roche, (28) Stelzer, (29) Arpan Mound, (30) Swift Bird Mound, (31) Grover Hand Mound, (32) Boundary Mound/Alkire, (33) Naze, (34) Anderson Tipi Ring (information from Ramsay 1991:117 and Gregg 1994:120).

In more recent developments, Dyck and Morlan (1995:537) identified previously un-named types of projectile points they called "Outlook Side-notch" which are believed to be the most enduring and prominent of several types of the Besant series. They named, defined and chronologically defined three main types in the series and they are the Outlook Side-notch, Sandy Creek and Bratton. Dyck and Morlan (1995) also point out that the oldest Besant projectile points appear to be arrow points which challenges the idea of a transitional appearance.

The Outlook Side-notch according to Dyck and Morlan (1995:437) is generally straight-based with the basal edge in planview forming either a straight line or a slight concave or convex line in which the depth of concavity or the height does not exceed 1 mm. In addition, it is stated to have broad "u" or "v" shaped notches, one on either lateral edge. Notches, according to description, are placed very close to the basal edge and often touch, and occasionally 1-2 mm of the basal edge is removed. Dyck and Morlan (1995:437) state that the edges of the blades are generally slightly convex and in cross-section the points are biconcave or plano concave. They point out that this type of point spans from the initiation to the demise of Besant and were used in both the arrow and dart technology.

Sandy Creek points were initially recognized by Wettlaufer in 1955 as side-notched, basally concave types (Dyck and Morlan (1995:398). This type of point, based on similarity, has been resurrected and modified because of new information and the seriation of Besant points. These side-notched and basally concave points are generally made of Knife River Flint.

Dyck and Morlan (1995:379) describe the Bratton point as having a convex base with the depth of the convexity more than 1 mm and less than 7 mm. They state that the point has two notches with openings either encompassing the point of juncture of the basolateral edge or situated no more than 1 mm above the points on the lateral edges. It is noted that this definition makes no distinction between corner-notching and side-notching since both appear on a single specimen. The points also have slightly convex to straight lateral edges (Dyck and Morlan 1995:379).

### **3.4 Dwellings**

The habitation structures for the Besant-Sonota people consisted of two types, the typical hide covered conical tipi and a post-in-ground type dwelling typical of the eastern woodlands. The most widely used dwelling for the Besant people was the portable hide tipi. Besant phase stone circle floor plans conform to the (contemporary) tipi (Vickers 1994:11). Several stone rings have been excavated in Besant levels in Alberta and Saskatchewan (Brumley and Dau 1988; Finnigan 1981; 1982; Quigg 1986). These tipi structures ranged in size up to 9 m in diameter (Dyck 1983:113). Vickers (1994:11) states that Kehoe's (1960) hypothesis for an increase in tipi size after the horse is not supported.

The second type of dwelling, described as the post-in ground dwelling, was found at a limited number of sites on the northern Great Plains. A double row of post hole stains in a semicircular shape was found in the Besant component at the Mortlach site (Wettlaufer 1955). Evidence of a more complete dwelling was found by Hoffman

in 1968 at the La Roche site in South Dakota (Neuman 1975:82). The hut measured 7 to 8 meters in size, with no evidence of a floor. There was, however, a large round pit, approximately 1.8 by 1.35 meters in diameter, in the center. A ridge pole is believed to have run the length of the structure, supported by upright posts at opposite ends (Neuman 1975:82). On the exterior of the dwelling was a small trash midden that contained bone fragments, fire-cracked rock, mussel shells and broken pottery. The dwelling was considered to be reminiscent of the bark or mat covered dwellings associated with Woodland complexes to the east (Dyck 1983:113).

At the Ruby site in Wyoming, Frison (1978:207) also found evidence of a structure contained within a large bison pound. Next to the drive lanes leading into the pound, Frison uncovered the post holes of a bi-pointed structure approximately 13 m long and about 5 m wide forming two intersecting arcs. This construction was divided in half by walls. This structure, according to Frison (1978), was likely some sort of religious architecture because it contained no domestic artifacts or a hearth. Recovered from the south end of the structure were eight male bison skulls with the noses pointing outward. Frison(1978) postulated that this structure was used to deal with the supernatural and may have been used to ensure the success of events that had a high probability of failure.

The earliest Woodland structure unearthed in the Northeastern Plains was found at the Naze site (32N246). Charred remnants of posts and post molds were uncovered at this culturally rich site (Gregg 1990). The residential structure was described as having eight posts that served as central supporting posts; however, no

remains of outer perimeter posts were found to indicate the total living area or space (Gregg 1990). The enclosed living space was approximated to cover a 6 m diameter area. Diagnostic Plains Woodland artifacts consisting of pottery and projectile points were recovered. The projectile points were identified as being Besant side-notched forms (Gregg 1990:34). The pottery from this site will be discussed later in this study.

### **3.5. The Sonota Burial Mounds**

Early and Middle Woodland burial practices involved the construction of mounds. It is generally understood that the burial mound trait was adopted from the south and out of the Hopewellian tradition (Whrite 1967:127). To define the Sonota Complex, Neuman (1975) used four mound groups: (1) Stelzer Mound, (2) Grover Hand, (3) Arpan, and (4) Boundary Mound, as the basis of his classification. He also included data gathered from the Baldhill, Schmidt, and Alkare sites, the Porcupine Creek component at site 32S16 and House 2 at the La Roche Site.

Neuman (1975:87), suggested that the Sonota mounds were comparable to the Rainy River Aspect burial traits in Minnesota and the Malmo Focus of the Mille Lacs Aspect mounds where ceramics were found to have a general likeness to Sonota ceramics. One of the four MacLaren mounds near Rock Lake in south-central Manitoba should be considered as having a Besant-Sonota cultural affiliation. The mounds were located adjacent to the *Nahastewin* site that was excavated in the 1993 season (Playford 1996). This site contained Besant-Sonota projectile points and ceramics.



Besant-Sonota burial mounds from the Middle Woodland

Period are best described by Neuman who stated the following:

...Religious aspects of the Sonota Complex are manifested by clusters of one or more low, domed earthen structures ranging from 55 feet to 100 feet [ 16.1 m to 30.4 m] in diameter and with a maximum apical height is between 1.4 and 7 feet [43.18 cm and 2.1 m]. Erosion has taken its toll and there is evidence indicating that originally the mounds were smaller in diameter and greater in height. Characteristically, the tumuli were built on the edge of the first high terrace or bench overlooking a river and they may adjoin the camping area of their builders (Neuman 1975:94).

The Sonota mounds generally contained primary and secondary bundle burials of 8 to 50 individuals of all ages and sexes that were usually found within a single subsurface burial pit and often associated with burial offerings such as pendants made from bear, beaver and human bone, marine and freshwater shell, copper and fossils. Pigments of hematite, green sand, magnetite and yellow ochre are included, and complete bison carcasses were also present within most of the burials (Neuman 1975).

### **3.6 Background and Description of Besant-Sonota Pottery**

Research concerning Besant-Sonota pottery on the Canadian Plains has been very limited. Most of the Besant-Sonota pottery bearing sites that have been systematically-excavated have not been fully assessed, nor have comparisons been made of the pottery specimens to see if any similarities or correlations do exist between them. In the past, pottery associated with the Besant-Sonota culture generally has been identified as a Plains Woodland manifestation. Several decades ago, there was some contention over the issue of

Besant sites in Canada actually containing pottery. Ongoing research has shown that Besant pottery does occur in low frequencies in some assemblages and, with the increasing number of pottery-bearing sites identified, the association has been generally accepted. However, most present knowledge about Besant-Sonota pottery has stemmed from sites excavated in the United States.

Sonota pottery was initially identified by Robert W. Neuman in the 1960's. He was responsible for the excavation of several archaeological sites along the Missouri River drainage from Kansas to Montana that were being threatened by the construction of dams and reservoirs. The unique Woodland potsherds he recovered have been used to describe the attributes characteristic of Sonota pottery.

The pottery was seen as a relatively recent introduction to the Sonota complex and was believed to be the result of technological diffusion onto the Plains from centers in Illinois, travelling the same path as the Hopewellian burial pattern (Neuman 1975:93, Johnson (1977a:38). As well, a number of eastern characteristics in the Besant pottery have been identified (Gregg 1985a:119 ) to back up this hypothesis. It has also been noted that the pottery frequency decreased in the north and northwest as one moved away from the Middle Missouri area (Reeves 1970b, Gregg 1985a). It has been difficult to ascertain whether ceramic technology diffused northward or whether the vessels were being traded or carried northward by a population that originated in the south (Hjermstad 1996:53). Another possibility is that it was the result of intermarriages between Plains Woodland and midwestern Woodland groups? Given

the present knowledge about the pottery, the only thing that can be done is to speculate.

Pottery production was seen as more than just a technological trait. It represented a significant innovation in the Northern Plains because its use created ramifications throughout social systems by providing vermin-proof food storage and a new range of food preparation capabilities (Gregg 1985a:117). The development and evolution of pottery also brought with it changes in paste qualities and morphology, providing clues as to differences in use patterns over time (Braun 1983:125).

Very little was known about the techniques of manufacturing pottery on the Plains by early archaeologists. For over a century it has been a subject of comment by early European travellers, explorers and ethnographers (Neuman 1955:13). According to Neuman, archaeological evidence does not indicate that all the methods of ceramic manufacturing reported in the accounts were practiced. The inconsistency of the accounts and the lack of corroborative evidence and the contrary archaeological evidence suggested to him that no observer saw a vessel completely made; hence accounts were based on hearsay, inference and speculation.

The process of ceramic manufacturing has been much more complex than initially suspected. A number of manufacturing techniques have been recognized as representing the evolution and refinement of the ceramic technology (Arthurs 1986:90). In the context of this thesis, the interest is in Middle Woodland Sonota Besant pottery.

Woodland pottery, in general, was made by the simple expedient of forcing the thumb or fist into a ball of clay and working it out until the desired shape was achieved (Arthur 1986:90). Ends of coils were also observed in the cross sections of Middle Woodland Laurel sherds thereby allowing interpretation of the method of construction. Besant-Sonota was paddled with a cord-wrapped paddle (Woods 1952; Neuman 1975; Wood and Johnson 1983). It can be speculated that other non-ceramic containers in the Middle Plains Woodland assemblage would have included storage containers and basketry made of biodegradable materials such as hide and bark.

There is an increasing number of what could be early pottery-bearing Besant-Sonota sites on the southern Canadian Grasslands. This is between the 49th and 51st parallel. The Canadian sites tend to be in close proximity to the Souris River drainage, the Pembina trench, the Moose Jaw River and a portion of the South Saskatchewan River. A number of these Canadian sites contain multiple components.

In the early 1970's, Byrne (1973:49) concluded that: "there was not one good example of the undoubted association of pottery in the Besant phase occupations on the plains north of the Missouri Coteau". He based this conclusion on the fact that the existing sites, such as Long Creek, United Church and Avery, that were identified as pottery bearing were plagued with stratigraphic problems. To his understanding, only Besant sites located south and west of the Missouri Coteau contained pottery. He did not, however, examine the Walter Felt site pottery (Ramsay 1991:82). The Walter Felt site (Kehoe 1964) association with Besant pottery was initially rejected

by most plains archaeologists; however, most now consider the associations to be valid (Reeves 1983:9). The oldest evidence of Besant-Sonota pottery on the Canadian grasslands comes from the Garratt site near Moose Jaw (Morgan 1979, Dyck 1983:120) .

Ramsay (1991) in communication with Jim Finnigan was told that the Rafferty Dam project along the Souris River revealed an association of pottery similar to Missouri-area Besant pottery. Recoveries of pot sherds from the Ratigan and the Crane sites in the Rafferty Dam project area conformed to characteristics of Sonota pottery (Ramsay 1991:82). In addition, Meyer et al. (1991) have noted evidence of pottery at the Biggar Bone Bed site in the Biggar area and the Mudrick Springs site in the Melfort area.

### **3.7 General Description of Sonota/Besant Pottery**

The Sonota potters technologically made one general class of pottery (Neuman 1975:93). It was suggested that the paste was obtained from local sources. The vessels also contained crushed granite. There was no evidence of coiling reported by Neuman; he surmised that the vessels were molded into shape by the paddle and anvil method. Vessels were determined from sizable sherds to be conoidal in shape. According to Neuman (1975), two restored vessels were 4 litres and 33 litres in capacity demonstrating the variation in size.

The surface finish of pottery was divided into two gross classes by Neuman (1975); cord marked and plain. Cord markings covered the exterior surface and extended into the rim interior, or just covered the vessel exterior, or mantled the upper portion of the

vessel's exterior as a result of being partially or totally obliterated from the lower body. Individual cord markings were reported to be often parallel to each other and their sizes varied considerably from one vessel to another. Cord marks were generally oriented vertically on the upper vessel wall and they crisscrossed on the lower body or on rare occasions were horizontal or/and diagonally oriented (Neuman 1975:93). Some plain surface vessels showed lustre while others did not and were reported to be the minority within the Sonota complex (Neuman 1975).

At least three decorative techniques were recognized and recorded by Neuman (1975:93). He stated that the most popular motif was punctates produced by the end of a finger or with a stick, in a single horizontal row of evenly spaced punctates that encircled the vessel's rim. On cord marked pottery, two instances were recorded where bosses and punctates were alternately impressed from the interior and exterior. The third motif found on vessels consisted of a single row of exterior punctates encircling the vessel rim and immediately below was a band of arched, diagonally oriented dentate stamps (Neuman 1975:93). This example is the reconstructed Stelzer pot and is illustrated in Figure 3.2.

In brief, the general description of the pottery is of simple shoulderless vessels with cord marked or plain surface finish (Reeves 1970b:164, Dyck 1983). The basic vessel shape is a shoulderless conoidal form that lacks a mid-vessel bulge, the lips are rounded, flattened, or out slanted in a range from 6 to 10 mm thick, the temper is coarsely crushed granite and the exterior surface treatment is sometimes smoothed but usually cord marked with cord

markings oriented horizontally, vertically or obliquely. Oblique tool impressions on the top of the lip and exterior or interior bosses with punctates are the decorative patterns found on most vessels (Gregg and Picha 1989:42).



**Figure 3.2:** A Stelzer site Sonota Complex vessel (Neuman 1975:151; reproduction with author's permission).



### **3.8 Summary and Discussion**

There are a number of scientific factors to examine when analyzing the attributes of projectile point types such as the ones that define the Besant-Sonota phase. Archaeologists are attempting to define sub-cultures from projectile point analysis. However, one thing that many researchers fail to consider is the individuality or individual technique applied by the knappers to their product. This may in part explain the variations found within projectile point morphology . One must also consider that projectile point manufacturing on the Northern Plains was not an industrially oriented skill, but may be strongly based on survival skills. However, there is no evidence to say that projectile points were not mass produced for trade.

Greiser (1994:34) points out that there are inadequate data because archaeologists don't understand how projectile points, as categorized, relate to human groups. However, she states that there is an increasing number of sites with ceramics, and researchers are getting closer to defining typical ceramics for each cultural complex. She notes that burial practices, rock art and petroforms are also becoming an important clue to ethnic identification.

Syms (1977:12 ) sees ceramic complexes as being traditionally more sensitive indicators of cultural boundaries and evolving changes than lithic tools such as projectile points. Because of its plasticity, pottery is one of the most sensitive archaeological indicators of regional sequences and cultural change in plains archaeology (Lehmer 1954; Wood 1967; Calabrese 1972 ; Syms 1977).



The Besant-Sonota procurement strategy may have surpassed that of any other Plains group. There is evidence of Woodland type structures found within various sites throughout the Besant-Sonota region, but the most common dwelling is the tipi. Burial mounds and the production of pottery have been considered to revolve around the heartland and associated with the Sonota subphase. Pottery has been increasingly found to be associated with the Besant-Sonota cultural phase but it has been found to be most abundant within the Missouri River heartland. The problem with pottery recovered in early excavations is that it was considered to be less important than the lithic artifacts and diagnostic projectile points. The parkland area between the boreal forest and plains has certainly generated much interest, as a result of the sites excavated by the author, and may be a significant factor when assessing the Besant-Sonota pottery. Pottery associated with Besant components has become increasingly evident on Canada's grasslands. Almost everyone doing research in the area of ceramics has agreed that the pottery emerged out of the Eastern Woodlands.

There is some contention and concern expressed in regards to terminology when studying past life ways. This contention also applies specifically to the study of pottery. As an example, Johnson (1977:35) points out the need to specify the distinctive criteria of Besant and Woodland to delineate the similarities and differences. She states that there appear to be major conceptual problems in the usage of the terms Woodland and Besant. Suggestions are made pointing out that the problem stems from using different criteria for the identification in different areas. As an example, Johnson (1977)

points out that cord-marked pottery is the primary characteristic by which Woodland sites are identified. In addition, ceramics are pointed out to occur in small amounts in widely scattered collections and are reported to be remarkably similar in paste, surface treatment, decoration, and form.

It is hoped that further research into the development of pottery on the Southern Canadian Grasslands will reveal more clues in order to increase the understanding of the Besant-Sonota culture. Clearly, defining the development of Besant has been difficult when considering the ambiguity that has developed in the varied hypotheses and speculations that have emerged. It has come to light that Besant underwent a technical transition; the projectile points tell one story. The attempt to subdivide the cultural phase into subgroups has been unsuccessful because the task has been found to be too monumental (Ramsay 1991). The development of ceramics on the other hand, tells another story. It is the author's contention that the most accepted hypothesis would be that the ceramic tradition derived from the Eastern Woodland area as a result of diffusion as the lithic technology originated and continued to evolve on the Plains.

## **4.0 Besant-Sonota Pottery-Bearing Sites in Manitoba**

### **4.1 Introduction**

Sites associated with the Besant-Sonota culture have been located in the parkland of Manitoba, and include the *Pinew Watci* site (DiLw - 2), the *Wapiti Sakihtaw* site (DiLw -12), and the *Nahastewin* site (DiLw-13). They were given Cree names because of the cultural background of the field crew involved in the field research. These sites were discovered during a larger survey undertaken of the Pembina trench. The writer was the field supervisor for the excavations of *Pinew Watci* and *Wapiti Sakihtaw* during the field season of 1992 and 1993.

As revealed in the archaeological evidence, the *Pinew Watci* and *Wapiti Sakihtaw* archaeological sites have proved to be a highly regarded hunting and habitation area for generations of nomadic bison hunters. The hill and surrounding area is still rich in big game today. Because of the scenic landscape, beauty and bounty of this land form, the sites may have held a sacred and spiritual significance to the ancient peoples who frequented the area.

The *Nahastewin* site was test excavated in close proximity to the MacLaren Earthworks near Rock Lake which is located along the Pembina trench in south-central Manitoba. These sites contain pottery that may conform to the existing Besant-Sonota descriptions. As with most Besant-Sonota sites, Knife River flint artifacts were found to dominate the lithic assemblages from these sites. Other Manitoba sites with pottery-bearing Besant (Sonota) components include the Avery site (Joyes 1970), the Mullet site, the Kain site

(Nicholson 1982), and the *Nahastewin* site (Nicholson 1995). The presence of vertical cord-roughened ceramics has been satisfactorily established at several Plains sites (Nicholson 1987:37).

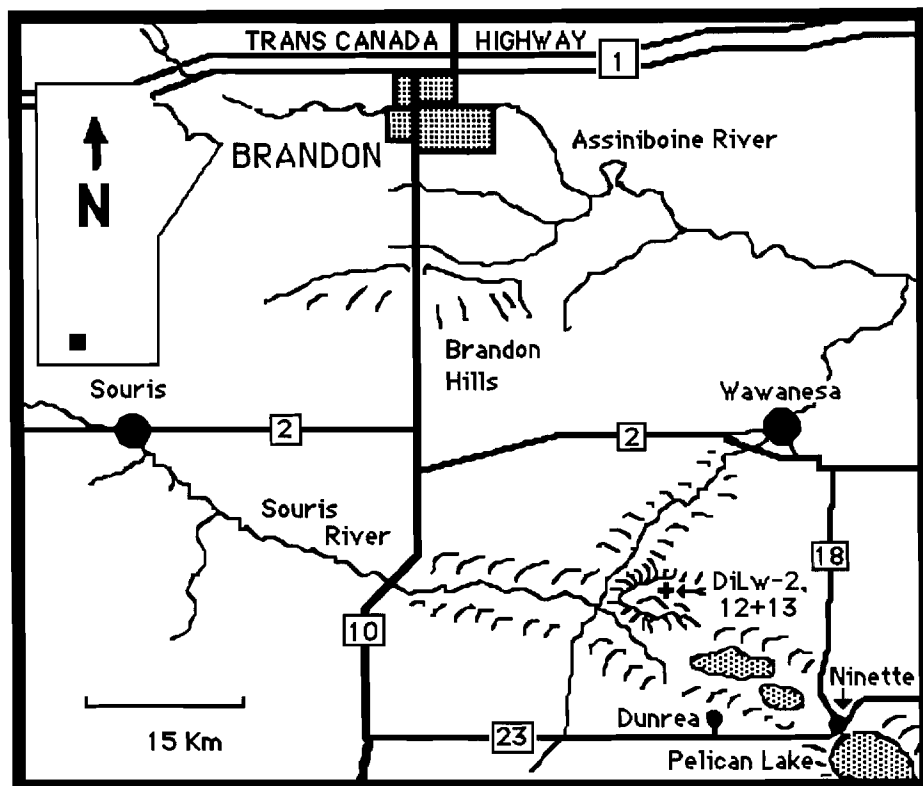
#### **4.2 Background on Sites the Author Excavated**

The *Pinew Watci*, *Wapiti Sakihtaw* and *Nahastewin* sites were found in the course of a much larger survey conducted along the Pembina trench with a research mandate that involved locating Late Plains Woodland pottery bearing sites. A number of the test surveys and site excavations became training grounds for a field crew of First Nation students attending Brandon University. The author was the field supervisor advised by the university's professor of archaeology, Dr. B. Nicholson.

The *Pinew Watci* and *Wapiti Sakihtaw* sites were located in an oak and aspen forest on the north face of a high glacial moraine called Big Tiger Hill which covers approximately 4 km<sup>2</sup>. The field crew gave it the Cree name of *Misipisiw Watcihk* which when translated means the Big Lynx Hill. There is no word for tiger found in the Cree language. The hill was named by the locals.

Big Tiger Hill may have provided ancient bison hunters with an ideal vantage point to monitor the ranging bison herds of the past. This large glacial moraine has maintained its panoramic view. Bone Lake and the larger Pelican Lake to the southeast can be seen from the top of Big Tiger. The Pembina Mountains are located a few kilometers to the east. It skirts a section of the northern rim of the Souris-Pembina trench approximately 1-2 kilometres east of the elbow of the Souris River as it turns north to meander through the

Wawanesa Plain. The town of Dunrea, Manitoba is also located approximately 15 km from the site above the southern valley rim (Figure 4.1).



**Figure 4.1:** Location of sites in south central Manitoba.

*Pinew Watci*, which means Partridge Hill in the Cree language, was first test excavated in 1991. Excavations of the site were completed in 1992 after a test on an adjoining terrace. This test resulted in the identification of a second site which was called the *Wapiti Sakihtaw* site. *Wapiti Sakihtaw* means the Elk Love It. Circumstantial evidence suggests that the two sites were remnants of a much larger Middle to early-Late Plains Woodland occupation. *Nahastewin* is a Cree word meaning "a place where things are put

away" and refers to the associated burial mounds called the MacLaren Earth Works at the north end of Rock Lake.

It was the duty of the field supervisor to instruct the field crew on the methodologies selected for conducting both the surveys and excavations. The field crew had no previous archaeological field work experience. The duties of the field supervisor included the constant monitoring of the excavation's progress. This also entailed the strategic placement of the succeeding excavation units as the excavation in each was completed.

Each excavation unit was a 1x1 m square. The general method of excavation was to segregate the unit into 50 x 50 cm quadrants and to dig in 5 cm arbitrary levels. Planviews were made as each level was completed and wall profiles were drawn and photographed once the unit was fully completed. The excavations in each unit concluded once the glacial till was reached. Units were numbered sequentially as the excavation progressed and the recovered artifacts were three point provenienced and field catalogued. At the end of the field season, they were taken to the university archaeology laboratory for further cleaning, identification corrections and stored for future analysis.

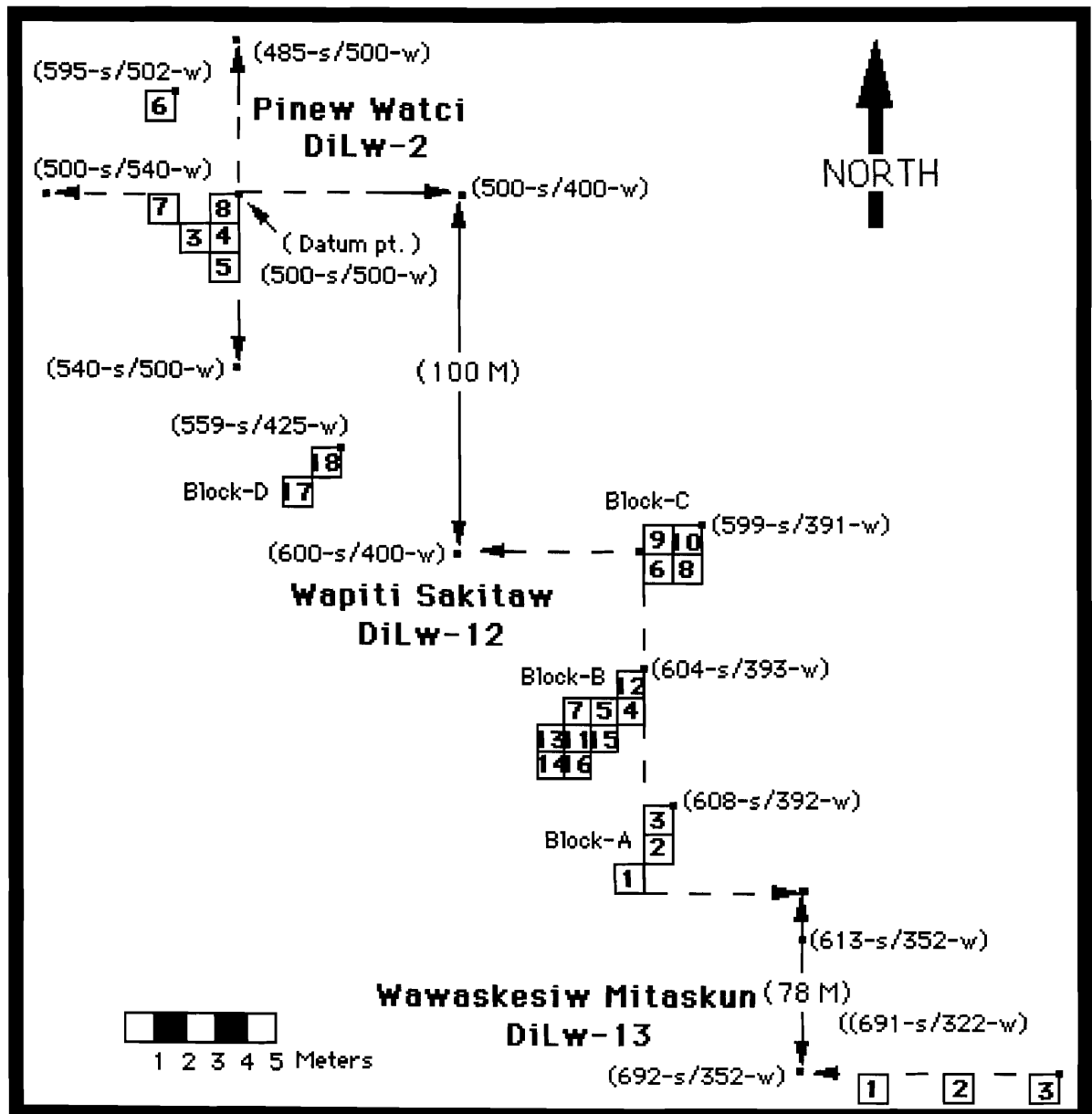
#### **4.3 Pinew Watci Site (DiLw-2)**

The *Pinew Watci* site is situated on a small undisturbed heavily wooded knoll on the north face of the highest point on Big Tiger Hill. The canopy consists of oak with an understory of perennial species such as poison ivy and sarsaparilla. It was the recovery of a potsherd during the initial survey during the 1991 field season that

stimulated the interest in the area and led to further testing. In the survey, a potsherd recovered from 30-40 cm below surface initiated the test excavation of units 6, 7 and 8. These units were numbered in accordance to what was initially called the Big Tiger Hill survey and excavated in 10 cm arbitrary levels. The results from this test excavation led to the expansion of the excavation in 1992. It was during this field season that a permanent site datum was established. The datum was used for the succeeding work at the *Wapiti Sakihtaw* and *Wawaskesiw* sites. The site datum was located in the northwest corner of Unit 8 and survey lines extended outward from the datum (see Figure 4.2). Units 3, 4, and 5 were added to the site. The 1992 excavation was done in 5 cm arbitrary levels.

All excavation levels contained lithic and faunal specimens. Among the identifiable lithic specimens were 11 utilized flakes, one end scraper and two bifaces, all manufactured from Knife River flint. In all, 55 lithic specimens were recovered, consisting predominantly of Knife River flint and Swan River chert. All the identifiable lithic artifacts were recovered from the 0-30 cm levels. In addition, 1.4 kg of fire-cracked rock were recovered at the site. Faunal recoveries consisted of 545 bone fragments which weighed a total of 1.2 kg. Bison was the most common species identified accounting for 7 large bone elements. As well, another 11 were identified as being ungulate. In addition, 2 small bone elements were identified as rodent. Unidentifiable bone fragments made up 48% and identifiable bone accounted for 49% of the bulk of bone weight. The remaining 3% of the weight was made up of burned and calcified bone

The site produced four potsherds during the excavation. However, the writer could not relocate the sherd that was recovered During the Initial survey in 1991. the sherd remains with the Pembina trench collection at the University of Brandon.



**Figure 4.2:** Site map of the three excavations on Big Tiger Hill. during the initial survey in 1991.



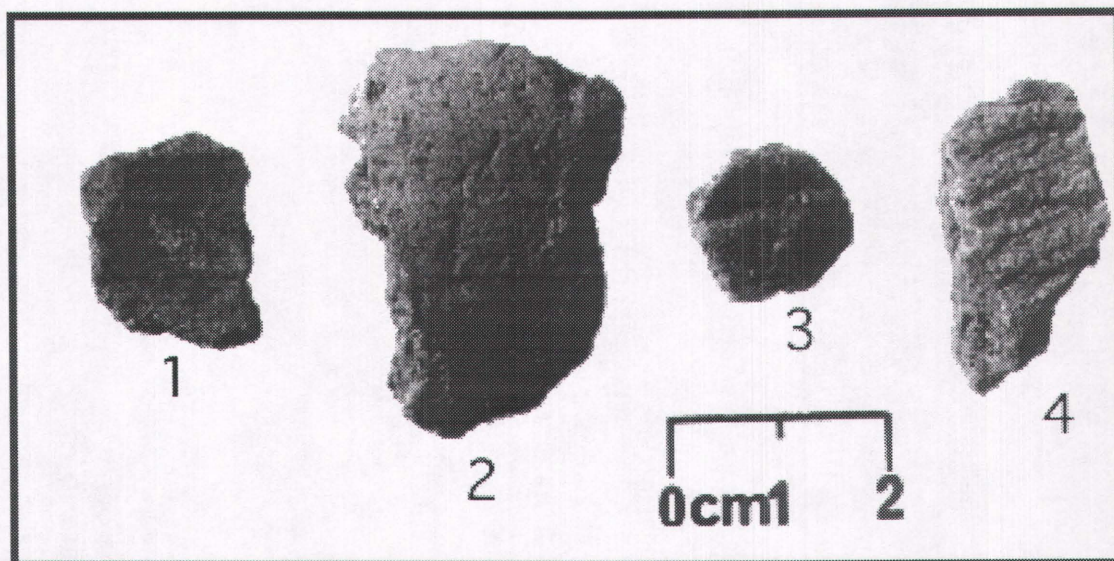
Body sherd-1 consisted of a fine paste and fine grit temper and was recovered from Unit 3 at 20 cm below surface. The sherd was cord-roughened and smoothed, and 7.4 mm thick ( Figure 4.3,1).

Body sherd-2 was recovered from the 20-25 cm level of the same unit. It appears to be from near the bottom of a conoidal vessel (Figure 4.3,2). The exterior surface is smooth and the sherd is 10.4 mm thick throughout. It also has a fine paste with fine to medium grit temper.

Body sherd-3, a cord-roughened and smoothed over sherd, was recovered in Unit 4 within the 10-15 cm level. It has a fine paste and a medium to coarse grit temper (Figure 4.3,3). It is 64 cm thick and appears to be weathered, and to some degree may have been leached. Body sherd-4 was recovered 10-15 cm below surface from the same unit. This sherd is 8.5 mm thick and the exterior cord-roughened and smoothed (Figure 4.3,4). Both the paste and grit temper are fine-grained.

The potsherds recovered were not immediately identified to cultural phase as were other well defined pottery specimens in the region. Indeed, the sherds were not identified as being associated with Sonota until excavations were conducted at *Wapiti Sakihtaw*.

The pottery specimens recovered at the *Pinew Watci* were too few in number and no diagnostic artifacts were recovered in both survey and in the excavation that followed. However the high concentration of the lithic material gave some clues to the possible cultural affiliation of the site.



**Figure 4.3:** Specimens recovered from the *Pinew Watci* site, the first sherd is smooth, the remaining three are cord-roughened.

#### **4.4 Wapiti Sakihtaw (DiLw-12)**

*Wapiti Sakihtaw* was designated an archaeological site during the 1992 field season after an extensive survey on a terrace next to the *Pinew Watci* site. What initiated the survey of the southeastern sector away from the *Pinew Watci* site datum was the discovery of three polished bone fragments on top of a pocket gopher dirt pile while brushing the survey line. The findings during the surveys that followed suggested that the *Pinew Watci* site was much larger than initially thought. The survey of the southeastern sector unearthed a substantial amount of lithic materials, faunal remains, fire-cracked rock and pottery. The recovery of a rim sherd led to excavation units being placed around the pottery bearing test pit.

A total of 18 1x1 m units were excavated at the *Wapiti Sakihtaw* site which was split into four main excavation blocks (see Figure 4.2). Block A was approximately 150 meters southeast of the

*Pinew Watci* site datum. The excavation site was situated on a slight incline with Block A being upslope from Block D. Block D was strategically placed between *Wapiti Sakihtaw* and *Pinew Watci* in order to determine if continuity existed between the two sites.

Stratigraphically, the *Wapiti Sakihtaw* site was found to be similar to the *Pinew Watci* site: a humus level, an A and B horizon and the glacial till. A unique find that set this site apart from *Pinew Watci* was a distinct paleosol which may have resulted from slope wash. It was identified in levels 2 and 3 and ranged between 5-20 cm in thickness. It first appeared in Block A and was diffuse in Block B. It was not identified in Block C and D. Bioturbation, from both rodent burrowing and tree roots, was found to be quite evident in most units.

There were 601 lithic specimens recovered of which 67 were identified as lithic tools and 538 were identified as flakes, some utilized. The lithic tool assemblage contained utilized or retouched flake tools, end scrapers, side scrapers, bifaces, projectile point bases and tips as well as grinding stones. Also recovered was an Agate Basin or Angostura point base, suggesting the presence of a Paleo-Indian occupation. As well, a fragmentary point was associated with the Besant-Sonota component. Other obvious point tips and bases were catalogued as bifaces. There was a substantial number of utilized flakes and uniface scrapers (including one unique bifacially flaked endscraper) recovered within a few millimetres above the glacial till. All levels in the excavation contained lithic materials.

The lithic assemblage consists of a high frequency of Knife River flint. Swan River chert is the next most abundant material.

Tongue River Silicified Sediment (TRSS), a rare material generally sourced from South Dakota, was also recovered during the excavation. A total of 4.4 kg of fire-cracked rock, primarily granite, was also found.

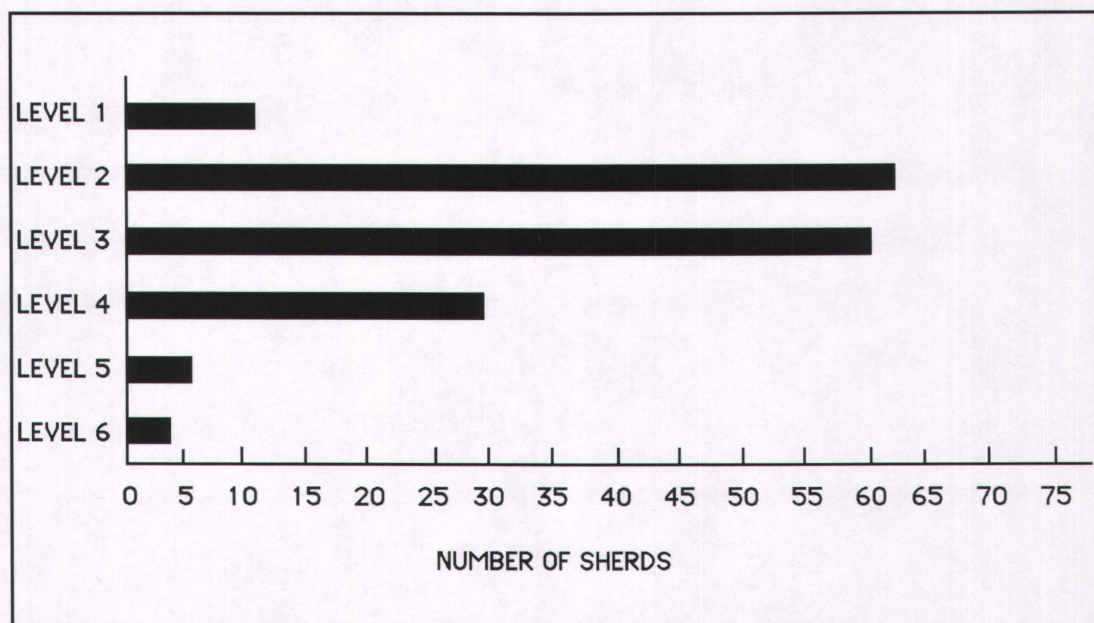
Unearthed were 3,729 bone specimens that weighed a total of 6.2 kg. Approximately 87% were unidentifiable bone fragments with 27% of the specimens being burned and calcified. Apart from this bone fragmentation, 13% of the bone was identifiable. Most of the identifiable bone elements were of bison. As well, 4 elements were identified as cervid. In addition, one canid mandible was unearthed. A number of small rodent bones were also recovered. Two radiocarbon dates were obtained from selected bone fragments from two different levels. The results are 1140 +/- 70 B.P. (Beta 59415) from bone in levels 2 and 3, (5-15 cm B.S.) and 1580 +/- 70 B.P. (Beta 59414) from bone recovered in levels 4 and 5 (15-25 cm B.S.) (Scribe and Nicholson 1994).

*Wapiti Sakihtaw* produced 167 potsherds, including 126 sherds from a heavy concentration in Block B. The remaining sherds were found to be evenly distributed throughout the excavation. Unit 18 was the only unit that did not produce pottery. The ceramic distribution in this site is illustrated by level in Figure 4.4. Levels two and three appear to be culturally dense and this correlates with the lithic distribution of the site.

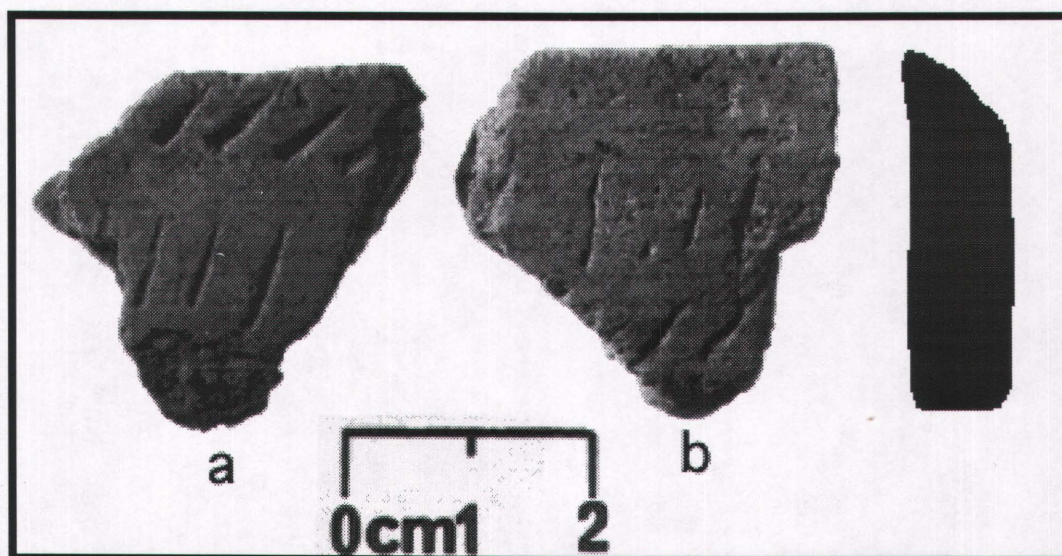
Among the ceramic sherds recovered from the site, five were rims. Three of the rim sherds were plain with a coarse paste and coarse grit temper. The rims were straight with a marked interior lip bevel. An insloped rim sherd (Figure 4.5, b) was recovered from



Block B which had a smooth surface with tool impressed decorations similar to the incised or tool impressed body sherds. This rim sherd also had a fine paste and fine grit temper.



**Figure 4.4:** Vertical distribution of ceramic sherds by 5 cm level.



**Figure 4.5:** A sample of *Wapiti Sakihtaw* incised sherds: a body sherd; b, rim sherd.



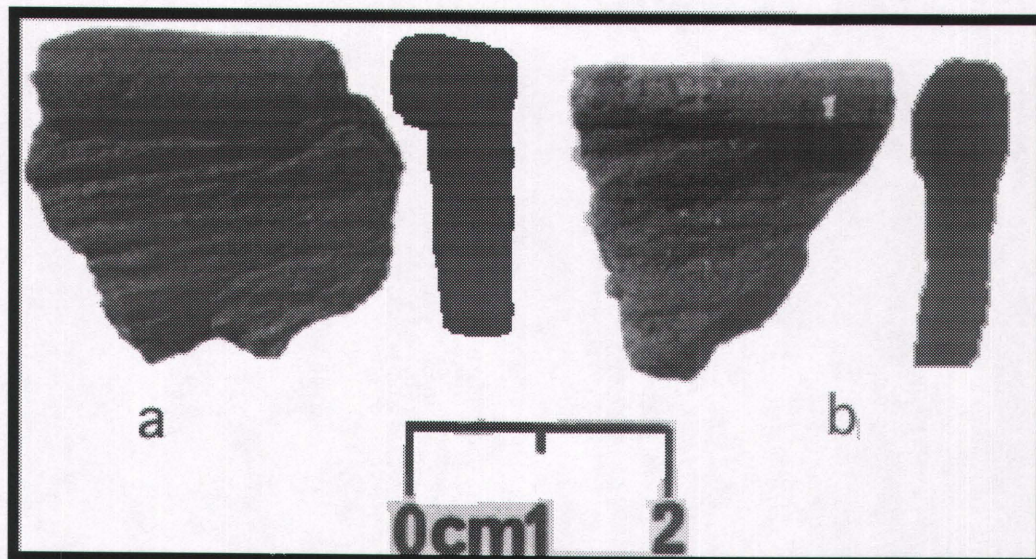
Nine of the body sherds show incised decoration similar to the rim sherds. They have rows of diagonal incised lines across a smoothed surface (see Figure 4.6). The incised lines are at 1 cm intervals. These incised lines appear to be made by a beaver incisor tool. The average thickness of these sherds was 7 mm. The sizes of the potsherds varied, with none larger than 3.5 cm across.



**Figure 4.6:** Incised tool impressed body sherd from the *Wapiti Sahkitaw* site.



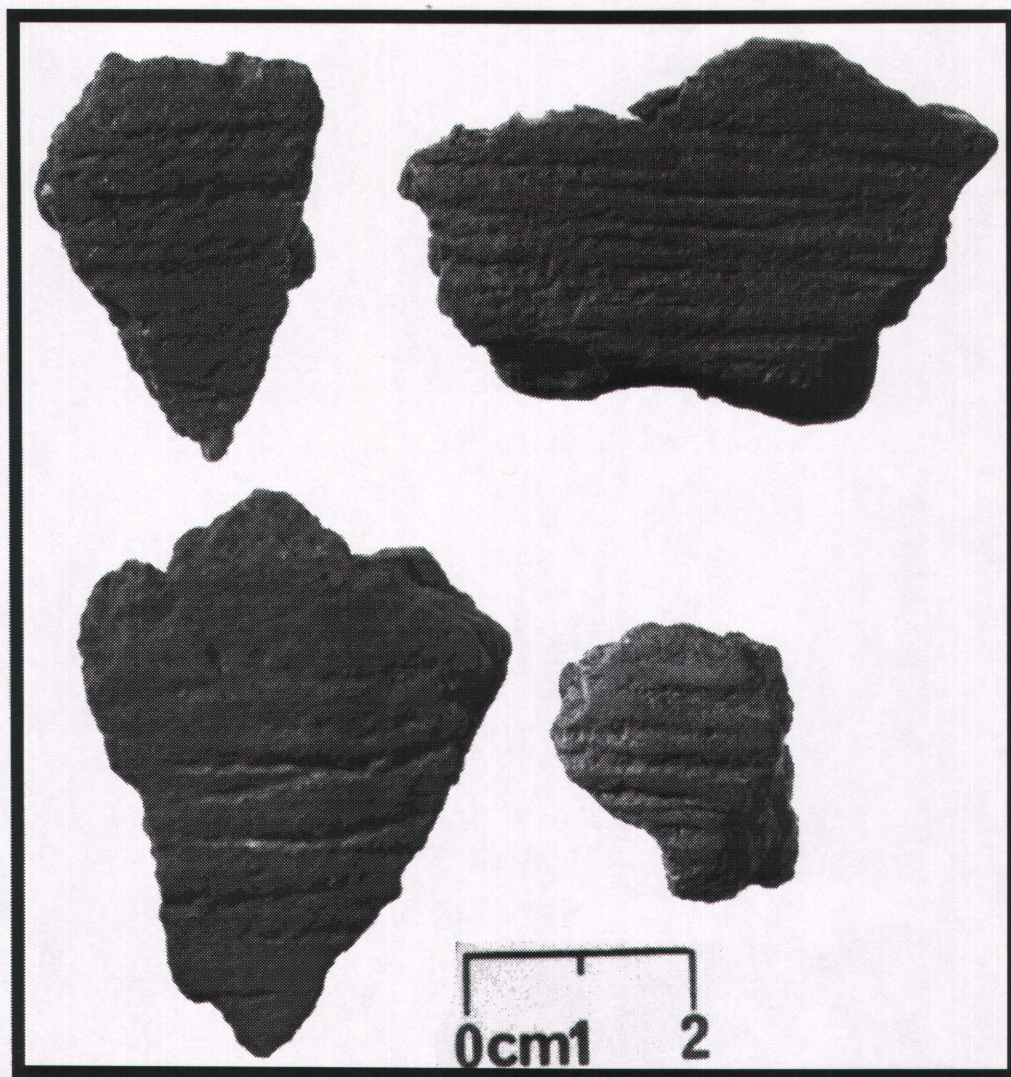
One folded or braced rim sherd was also recovered (Figure 4.7,a) It bears a cord-roughened exterior. The paste is fine, with medium to coarse grit temper. A similar sherd was recovered during the survey (Figure 4.7,b).



**Figure 4.7:** Folded rim sherds recovered from the *Wapiti Sakihtaw* survey and excavation.

Five cord-roughened sherds were identified. Some have a visible "S" twist cord impression. Three of these sherds have coarse paste and coarse grit temper. One has a fine paste and fine grit temper. The sherds are irregularly horizontal cord-impressed. The average thickness of the cord marked sherds was 9 mm, some have indications of coil breaks. One rim sherd also had similar surface characteristics. It is possible that two vessels may be represented. Nine body sherds had a cord marked obliterated surface. Most of these sherds were of a fine paste and fine grit quality. These sherds suggests that a third vessel may be represented. Figure 4.8 illustrates four of the cord-roughened sherds.

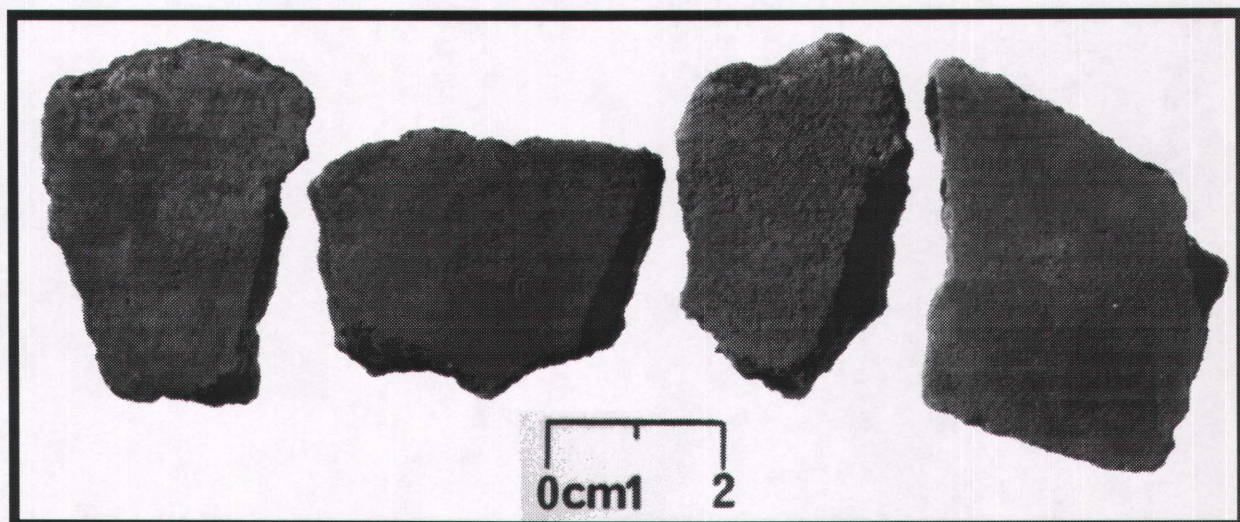




**Figure 4.8:** A sample of cord-roughened sherds. Note the visible S or Z twist on the first sherd.

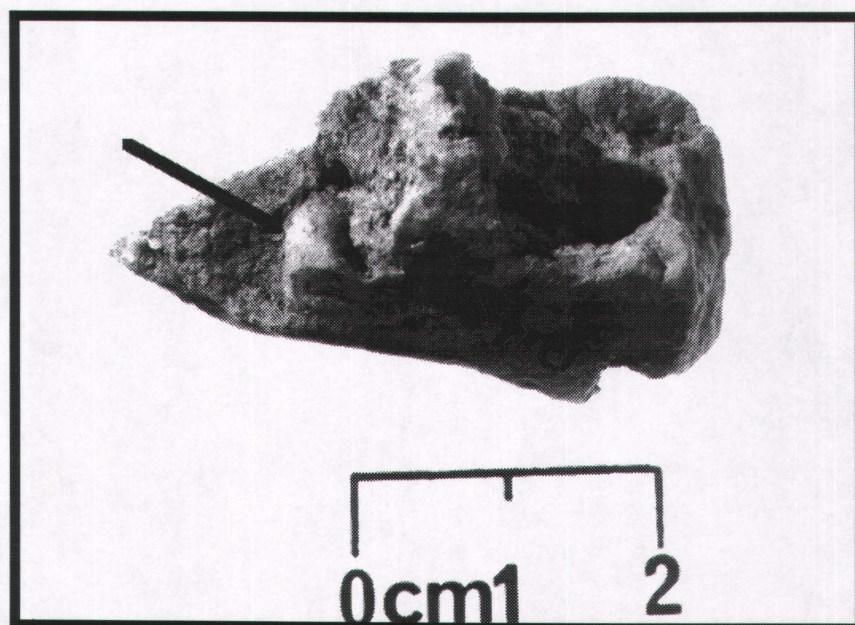
Eighty-nine of the sherds have a smooth surface (Figure 4.9). The paste ranges from fine to coarse as does the grit temper. No punctates or decorative patterns were identified on the sherds. Because of the smooth surface finish, it is possible that they represent one vessel. Smooth surfaces are characteristic of Laurel pottery which is occasionally present in Besant-Sonota sites. These sherds suggest that a fourth vessel may be represented.





**Figure 4.9:** A sample of smooth sherds recovered from *Wapiti Sakihtaw*

No vessel reconstructions have been attempted because of the small sample size. A piece of daub was also recovered and fits in the hand quite well, it may have been squeezed and tossed into the fire (Figure 4.10). A portion of it broke off and was not recovered in the excavation.



**Figure 4.10:** Daub recovered from the excavation. Note the possible coil of clay in the daub matrix.

At *Wapiti Sakihtaw* dense concentrations of artifacts were recovered in levels two and three, and progressively thinned out until the glacial till was reached. Bioturbation was evident throughout the site. The analysis of the artifacts from the site suggests that the Besant-Sonota culture is represented. A paleosol was also identified within the upper levels of the site. No cultural features were identified during the excavation. The radiocarbon samples taken from the site dated to 1140 +/- 70 B.P. in levels 2-3, (5-15 cm B.S..) and 1580 +/- 70 B.P. in levels 4-5 (15-25 cm B.S.).

There is also a possibility of a much older occupation, although the Agate Basin or Angostura point base recovered from level 4 may have been curated into the site (Scribe and Nicholson 1994:126). The author feels that this older occupation was missed in the surveys and excavations.

#### **4.5 The Nahastewin Site (DiLt-17)**

The *Nahastewin* site (DiLt-17), as illustrated in Figure 1.1, is located adjacent to the McLaren Earthworks in the parkland of southwestern Manitoba. A series of surveys and excavations were conducted at this site as a result of an archaeological reconnaissance of the Souris-Pembina Trench conducted by Dr. Nicholson and his field crew of students in 1992 and 1993. The abundant recoveries from a shovel test in the northwest sector adjacent to the earthworks led to the decision to excavate eight 1 x 2m test units. An additional 11 units, 1x1m<sup>2</sup>, exposed a limestone feature. One of the main reasons for undertaking the tests was because this area was to be affected by the construction of a cattle feed lot by the land owners.

The Rigilin site (DhLt-14) was originally considered a separate site from *Nahastewin* ; however, the survey tests showed no clear boundary between the two. Playford (1996:3), therefore, has combined the sites under the same name, *Nahastewin*. The MacLaren earthworks (DhLt-2) were excavated in 1940 by Chris Vickers (Playford 1996:3). The area was plagued by pot hunters for a very long time (Syms 1977).

There were 19 units excavated at the *Nahastewin* site with 11 units excavated to 20 cm and 8 excavated to 35 cm. below surface. The site is considered to be multicomponent. There was a wide variety of lithic artifacts recovered which totaled 616 pieces with 36 tools including 10 projectile points. Endsrapers, ground and pecked stones, choppers, drills, sidescrapers and bifaces accounted for the remainder of the lithic tool assemblage. Projectile point types have been identified as Avonlea, Prairie Side-Notched, Sonota/Besant and Pelican Lake. Along with the lithic recovery was fire-cracked rock. There was no indication of features such as hearths or boiling pits. There was, however, a feature consisting of limestone slabs stacked side by side that contained the Pelican Lake point (Playford 1996:24)

Playford (1996:24) stated that faunal remains were the most abundant material found in the site with a wide diversity of species represented. Bison was the most prominent, although canid and fox, cervid, moose, lagomorph, beaver, pocket gopher and various birds were identified. Fresh water mollusk shell was also recovered in the excavation.

Out of the 109 sherds recovered, eight were identified as Plains Woodland pottery. This pottery was excavated in the vicinity

of Besant-Sonota and Avonlea projectile points (Playford 1996:70). According to Playford (1996:82), 5 rim sherds and 3 shoulder sherds were recovered. Also identified were 13 sherds that were classified as indeterminate due to exfoliation and small size. In all, 86 were classified as body sherds. Playford (1996) identified 8 of these sherds as Plains Woodland pottery representing 5 vessels. Playford (1996) affiliates the sherds with Avonlea and Besant-Sonota and possibly Laurel cultures.

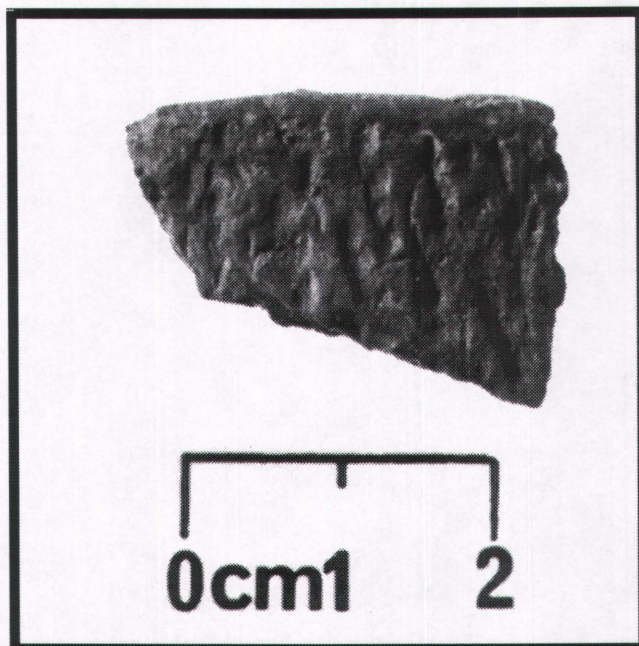
Playford (1996:13) described one vessel, with the assistance of Dr. Nicholson, as having a smooth surface with decoration being horizontal cord-wrapped object. This vessel, however, falls under the cord-roughened category. The paste and grit was described as being fine. A cord-roughened rim sherd is illustrated in figure 4.11. *Nahastewin* produced a rim sherd that was identical to the Indian Hill rim sherds discussed in chapter 6.

Figure 4.12 illustrates four cord-roughened body sherds recovered at the *Nahastewin* site. From the sherds, a second vessel was represented by three body sherds that were undecorated and had a cord-roughened surface (Playford 1996:14). The grit was fine, the paste laminated, and the sherds were believed to belong to the same vessel because of the similarity in surface finish and paste quality. Both Avonlea and Besant points were found in association with these sherds suggesting them to be of either origin.

One other body sherd was also cord-roughened but did not exhibit the same type of grit and so was thought to represent a third vessel. The fourth vessel was represented by a body sherd with a wiped surface finish and cord-wrapped impressions. The sherds also



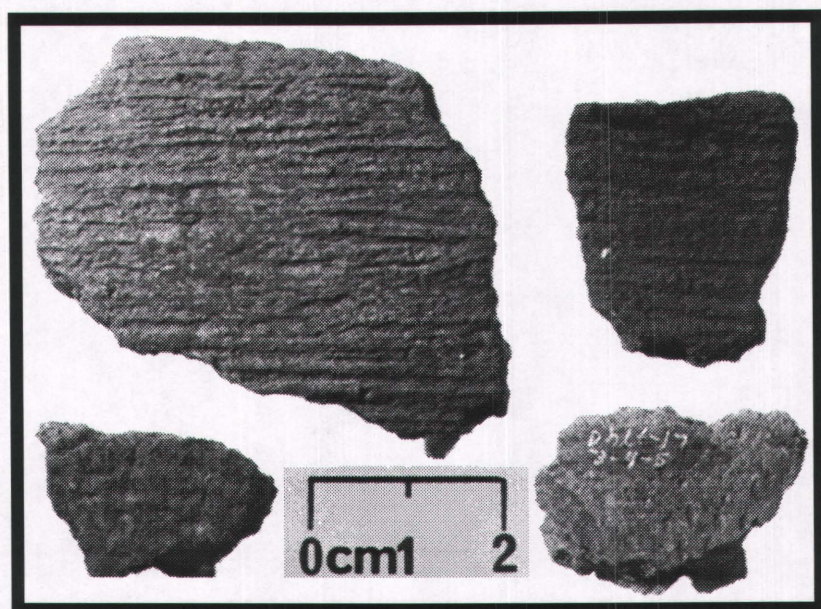
had an edge which is consistent with coil breaks (Playford 1996:14). Coiling has been seen as a common method of manufacturing for Laurel and, perhaps Avonlea pottery. Playford (1996:14) stated that these sherds were most likely Avonlea or Sonota/Besant.



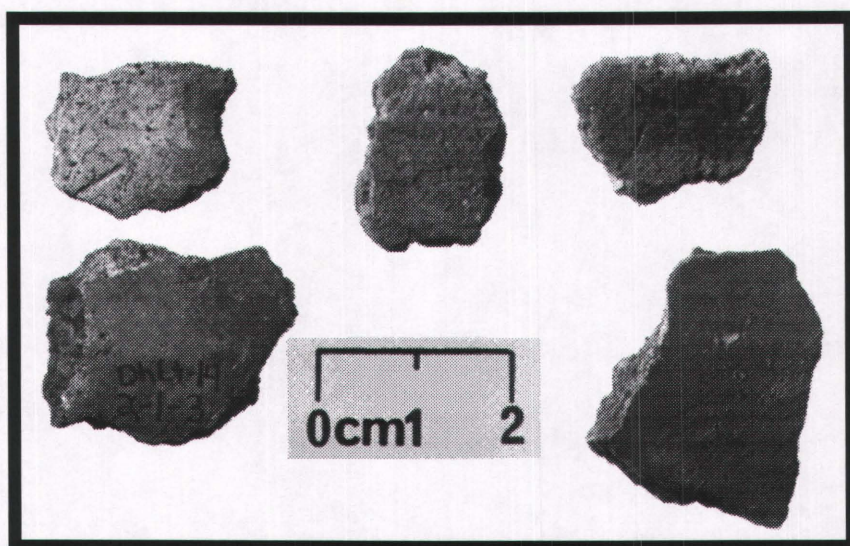
**Figure 4.11:** An example of one of the cord-roughened rim sherds recovered from the *Nahastewin* site. This rim sherd is similar to the Indian Hill rim sherd discussed in the next chapter.

The fifth vessel was represented by a single net impressed body sherd (Playford 1996:15 ). This type of pottery, according to Playford (1996), has been affiliated with Avonlea and considered Brainerd ware in Minnesota. A sample of smooth sherds also recovered at the site are illustrated in Figure 4.12.





**Figure 4.12:** Cord-roughened sherds from the *Nahastewin* site.



**Figure 4.13:** *Nahastewin* smooth sherds, note the incised sherd on right hand corner.

#### **4.6 Summary of Author's Excavations**

*Pinew Watci* has been interpreted as a domestic site, as revealed in the artifact assemblage recovered. The excavations did not reveal any indications of primary butchering; however, there is

evidence of secondary processing. This can be determined by the high frequency of faunal remains and lithic materials uncovered. The site location, being situated on a small knoll, may have provided appropriate drainage during the spring thaw and during heavy rains. It has not been determined whether this was a forested area during the time of occupation. But, since it is located on the north side of the hill, it is safe to assume that it was forested since climatic conditions are thought to have been no different than at present.

The *Pinew Watci* and *Wapiti Sakihtaw* sites are most likely associated with the Besant-Sonota culture. These sites contain projectile point tips and bases as well as a high percentage of Knife River flint that is characteristic of Besant and the subphase Sonota. No other cultural phase on the Northern Plains has been known to produce the same high frequency of Knife River flint (Neuman 1975, Syms 1977, Reeves 1983, Gregg 1987). As well, potsherds and rims from these sites conform to attributes and styles of the Middle to early Late Plains Woodland period and also have certain stylistic characteristics similar to Besant-Sonota pottery bearing, as identified by Neuman (1975).

At these sites, a major occupation occurred in level two which contained dense lithic and ceramic concentrations. The artifacts recovered from the dense cultural level are identified as Besant-Sonota. The level above may date to the early-Late Plains Woodland period. Artifacts were recovered down to the glacial till level, suggesting the possibility of continuous occupation since the Paleo-Indian period.

There are close correlations in cultural materials and depositional characteristics between the *Pinew Watci* and *Wapiti Sakihtaw* sites. In fact, it appears that they are one and the same site. Indeed it would be the author's preference to combine the two sites under the name *Pinew Watci*.

Cut marks were identified on 43 of the bison bone specimens, strong evidence for butchering, possibly secondary butchering since most of the bone recovered was fragmented and some burnt. In addition, 19 bone fragments showed evidence of gnawing by either domestic dogs or predators. A most interesting piece is the daub recovered. It leads one to suspect that pottery manufacturing was also occurring at the site. It is unfortunate that no cultural features were identified in the excavation.

The four potsherds recovered during the excavation of the *Pinew Watci* site gave limited detail, but it is possible that two vessels were represented, a smoothed vessel and a cord-roughened one. However, the attributes and the distribution of the 167 sherds from the *Wapiti Sakihtaw* site suggest that at least four vessels were represented, one vessel consisting of smooth sherds, another smooth with incised decoration (or could be part of the latter vessel) and a third which was irregularly cord-roughened. The fourth vessel was recovered in block D, between the two sites, and was represented by small sherds that had coarse grit and fine paste.

Five rim sherds were recovered from the site, one with an insloped rim sherd and smooth surface and tool impressed or incised decorated body sherds. The sherds had a row of incised lines in a one centimetre interval across a smoothed surface possibly made by



beaver incisors. One folded or braced rim sherd was also recovered which was cord-roughened. As well, a number of the cord-roughened sherds had irregular cord impression. Some sherds had coil breaks that were unusual for Besant-Sonota. Some body sherds had a cord-marked obliterated surface. A large number of sherds also had a smooth wiped surface, possibly representing a fourth vessel. No vessel reconstructions have been attempted because of the small sample size.

The *Pinew Watci* and *Wapiti Sakihtaw* sites contained a high frequency of Knife River flint projectile point bases and tips, scrapers and bifaces, and reflect a Besant-Sonota characteristic. Domestic sites have high numbers of bone fragments and fire-cracked rock suggesting bone grease processing. Unfortunately, no hearths or boiling pits were unearthed to support this hypothesis. The characteristic of the pottery may represent interaction between Plains and Woodland groups in the Parkland. It could also be speculated that the parklands was the area for Plains groups to acquire the ceramic technology. The ceramic attributes from these two sites certainly reflects this possibility because of their Woodland characteristics.

No dates have been obtained from *Nahastewin* but it is suggested, based on the associated lithics, that it is contemporaneous with *Wapiti Sakihtaw*. According to Nicholson (1995:70), one vessel from the *Nahastewin* site had unusual cord-impressions similar to the Sonota specimens from the *Wapiti Sakihtaw* site. The ceramic sherds show evidence of coil manufacturing and the cordage appears to be very fine and tightly twisted. In addition, the cord markings

are horizontal rather than vertical, and the conoidal shape of the pottery is consistent with Neuman's (1975) recoveries. The smooth body sherds have characteristic of Sonota/Besant and Laurel ware. Cord-roughened ware has been associated with the early development of Middle Plains Woodland pottery. The site's location in the parkland strongly suggests that contact between Besant-Sonota and Laurel cultural groups may have occurred. The most likely scenario is that a plains-adapted group may have shared the parklands of southern Manitoba during a seasonal round with a boreal forest group, perhaps to trade and socialize.

The *Nahastewin* site, according to Playford (1996:70) shows possible interactions between Besant-Sonota and Avonlea groups. Besant-Sonota and Avonlea points were recovered in adjoining test pits. Pottery was recovered in the same area as the Besant-Sonota and Avonlea projectile points. All Laurel specimens and some Sonota have coil breaks, which are rare or absent in Avonlea. According to Playford (1996), neither projectile points nor pottery from the site indicate an Avonlea and Besant-Sonota co-occupation. According to Nicholson (1995), it was most likely that groups gathered there for sacred ceremonial reasons. The habitation of the *Nahastewin* site is thought to have some correlation with the adjacent mounds (Playford 1996).

With the exception of *Nahastewin*, which is a multi-component site, *Pinew watci* and *Wapiti Sakihtaw* were spatially and culturally correlated. They demonstrate a similar lithic assemblage. There is some correlation in pottery characteristics throughout these sites, especially in the consistent presence of cord-roughened exteriors.

#### **4.7 Other Manitoba Sites to Consider**

The Avery Site (DhLs-2), named after the land owner, is located on the northeastern shore of Rock Lake near Pilot Mound, Manitoba. Chris Vickers conducted archaeological investigation here from 1944 to 1948 and in 1966-1968, Dr. Mayer-Oakes and students from the University of Manitoba continued further field work (Joyes 1970:209). A number of cultural sequences were well represented, with pottery present for less than half of the inferred occupational history of the site (Joyes 1970:210). Besant points from the site were reported to be comparable to the points from a number of other sites on the Northern Plains. The associated items include oval and ovate bifaces, lamellar and plano-convex end scrapers, triangular unnotched points and retouched blades and flakes with Knife River flint the dominating lithic material (Joyes 1970:210).

Laurel ware along with Avery corded ware was identified (Joyes 1970:210). The Avery Corded ware consisted of 31 rim sherds and a undetermined number of cord-roughened body sherds represented 7 different vessels (Joyes 1970:122). Joyes (1970:124) considered roughened surface to have been produced by a paddle wound with cords ranging from 0.5 to 1.5 mm in width. The cords were stated to be composed of more than one strand tightly twisted in a clockwise (S twist) fashion and having the cord impressions oriented diagonally, horizontally or vertically on the vessel exterior. The temper of the sherds was described as consisting of angular particles of quartz, feldspar and mica which is thought to have derived from crushed granite. The particle size ranges from being

barely visible to 4 mm across. The paste texture was described as very fine to very coarse and porous with the sherds having a tendency to split and crumble (Joyes 1970:125).

One decorated rim sherd had a series of impressions placed across the lip producing a scallop effect. The exterior of another had large circular punctates, 10 mm in diameter. Two sherds were described as having elliptical punctations that were thought to be made by a pointed object that was thrust into the clay at an upward angle.

Joyes (1970:132 ) described the cord-roughened vessel as having either a straight to slightly out flaring rim ranging from 4 mm to 10 mm in thickness. The lip was flattened or rounded with an overhang of clay on the exterior edge. The vessel body was conoidal and coil breaks were reported on one of the rim sherds and on cord-impressed sherds. The coil method of manufacturing remained inconclusive (Joyes 1970:123).

The United Church site, excavated in the 1950's, is located in the Pembina channel on the north shore of Rock Lake in southern Manitoba (MacNeish and Capes 1958). Two main classes of pottery were reported to be found at this site: Avery Corded and Laurel Plain. MacNeish and Capes (1958:123) interpreted the relationship of the site on the basis of the pottery stating that the occurrence of brown chalcedony dart and spear points occurring with pottery was also common in eastern Manitoba appearing in the Anderson and Nutimik Foci. They further suggested that either the same type or a similar one is widespread in the Northern Plains. The pottery was

also stated to be similar to that of the Middle Woodland horizon in midwestern United States.

MacNeish and Capes (1958:137) stated that 377 sherds were examined from the upper 5 levels, and 4 pieces recovered from rodent holes in Levels 7 and 8. The temper of the Avery corded ware was described as consisting of crushed quartz, ranging from 4 mm to 5 mm in size. The paste was described as poorly knit and coarse textured. Vessel walls were 5 mm to 8 mm in thickness and thought to be coil made. The surface finish was described as cord-wrapped, paddled, or paddle-impressed making horizontal cord impressions. The paddles were interpreted as irregularly wound with widths between the cord impressions varying from 1 to 8 mm (MacNeish and Capes 1958:137).

Twelve of 16 rim sherds were stated to represent 10 varieties. Some rims were reported to show interior punctating made with a conical object approximately 4 mm in diameter causing bosses on the exterior. Some lips were also reported as marked with cord impressions or incising. In addition, one rim sherd and two body sherds had incisions, in no regular pattern, made by a sharp instrument criss-crossing the cord impressions. MacNeish and Capes (1958:137) stated that this type of pottery was similar to Lockport Corded Ware in southeastern Manitoba and the cord marked wares of the Malmo Focus of northern and central Minnesota.

In addition, MacNeish and Capes, (1958:139) identified 240 Laurel Plain sherds from the this site. The temper was described as consisting of crushed rock, mainly quartz. The paste consistency was poorly knit, with an angular, coarse texture. The sherds were 4 to 10

mm thick. The manufacturing technique was thought to be coiling, but no coil breaks were identified. The surfaces were brushed horizontally to smooth the interiors and exteriors. Decoration was uncommon; however, three out of 12 rims were reported to have interior punctates which caused bosses on the exterior. As well, there was dentate stamping and linear punctating by a stylus on a few body sherds.

MacNeish and Capes, (1958:141) stated that the United Church pottery occurred over much of northern Minnesota and all of southern Manitoba. It was also seen as the major type in what was termed the Anderson focus and to have died out in the Nutimik focus in southern Manitoba. In Minnesota, it was stated to be the major type in the Laurel and Malmo focus and in the Kathio and Howard Lake foci (MacNeish and Capes, 1958:141). The site was reported to contain Avery Corded sherds that were embossed and had irregular incising. Partially reconstructed vessels reported as Avery Corded ware were also found in the Melita locality in extreme southwestern Manitoba (Joyes 1970:125).

The Richard's Village site consists of a large surface collection and was a multi-component site that contained ceramics and other Besant-Sonota materials that were similar to those from Neuman's (1975) Stelzer Mounds (Syms 1977). Other Pembina River Valley sites such as Zeb Montroy and several collections from southeastern Manitoba also reveal a Sonota association (Syms 1977:90).

The Kane site, excavated by B. Nicholson in 1980, is located on the south bank of a small stream flowing into the Assiniboine River near the village of Chater, Manitoba. Dates from this multiple

occupation site were found to be consistent with the Middle Plains Woodland period (Nicholson 1982). In the 19 units excavated, 10 body sherds were recovered. According to the stratigraphic relationship of 9 body sherds, it was considered that they were of the Late Woodland period (Nicholson 1982:23). Nicholson (1982:23) stated that a remaining small sherd was not easily classified. The paste was finely textured and contained a coarse grit temper. The interior was smooth and the exterior bore parallel curved impressions made by a thumbnail or small spatulate tool. It was recovered from level 4 of unit 7 and in level 5 a single Besant projectile point made of Knife River flint was recovered (Nicholson 1982:23-35).

The Mullet site (DiMd-7), located near the town of Hartney, Manitoba, is situated on the bank of the Souris River near the Lauder Sand hills (Peach 1988:3). The major occupation of the site was considered to be part of the Besant complex. (Peach 1988:3). According to Bev Nicholson (personal communication) two ceramic sherds in poor condition were recovered.

The *Wawaskasiw Mitaskun* site (DiLw-13) is located 79 m south and 51 m east of the *Wapiti Sakihtaw* site. Six body sherds were recovered in unit 2, 5-20 cm in depth. Two sherds were fabric-impressed with a coarse paste and coarse grit temper. Two other sherds were smooth, one having a coarse paste and fine grit temper, the other with a fine paste and fine grit temper. The remaining body sherd is fabric-impressed with a fine paste and coarse grit temper. The last body sherd recovered from Unit 3 was also fabric-impressed. It was manufactured with a fine paste and fine grit

temper. The sherds resemble Middle Plains Woodland period and early Late Plains Woodland pottery. A Sandy Creek point was recovered in the same test survey.

#### **4.8 Summary and Discussion**

The general descriptions of Plains Woodland ceramics provided by Wood and Johnson (1973) and Neuman (1975) share the stylistic characteristics of the ceramics sherds recovered at the *Pinew Watci*, *Wapiti Sakihtaw* and *Nahastewin* sites. The artifacts do correlate with those of other known Besant-Sonota pottery bearing sites throughout the Canadian grasslands and the rest of the Northern Plains (Wettlaufer 1960, Johnson 1977b, Neuman 1975, and Morgan 1979). The presence of cord-roughened pottery has also been satisfactorily established at several Middle Plains Woodland sites (Nicholson 1987:37).

Nicholson (1995:70), however, states that the wedge-shaped rims recovered at *Wapiti Sakihtaw* have rows of small diagonal tool impressions which are quite unlike Neuman's recoveries along the Middle Missouri. The body sherds from *Wapiti Sakihtaw* consisted of smoothed sherds that displayed irregular horizontal or vertical cord-roughened impressions. Some were decorated with cord-wrapped object impressions as well as being incised. These sherds resemble the sherds described by Neuman (1975) and Stoltman (1973). The smoothed-exterior sherds and presence of a possible coil break in one sherd is indicative of Middle Woodland technology, primarily that associated with Laurel. Similarly, the vessel shape, which



appears to have been conoidal and lacking in any marked shoulder curvature, supports a Middle Woodland assignment.

According to Playford (1996) the *Nahastewin* pottery, since it consisted mainly of body sherds, was difficult to identify culturally. However, coil breaks found on sherds recovered from the same occupation level were considered to be associated with both Avonlea and Sonota. Playford (1996) could not determine if the site was co-occupied by both or had any interrelationships with other archaeological cultures. Pelican Lake points and Blackduck pottery were also found at the site.

Avery Corded Ware consists of cord-wrapped paddle sherds. The cord was of more than one tightly woven yarn with a twist woven counter clockwise that was irregularly wound and had varying cord impressions. Laurel Plain sherds have a smooth surface finish with a coarse temper of crushed rock. Three rims had interior punctates which caused bosses on the exterior and included linear punctating and dentate stamping. A rim sherd and two body sherds were described as having incisions criss-crossing the cord impressions similar to Lockport Corded Ware in southeastern Manitoba and the cord marked wares of the Malmo Focus in Minnesota (MacNeish and Capes 1958:123).

Syms (1977:90) stated that the Richard's Village site Besant materials were similar to the Stelzer Mounds and the Pembina River Valley, Zeb Montroy Site. Avery Ware from the site with the same name, was cord-roughened. These impressions were thought to be made with a cord-wrapped paddle. Cord impressions ran diagonally, horizontally and vertically on the vessel. The temper consisted of

crushed granite and the paste was very coarse and porous with tendencies to split and crumble. Small samples conforming to Besant-Sonota were also found in the stratigraphically plagued excavations of the United Church site. Uncovered were Avery corded and Laurel plain ware similar to the Anderson and Nutimik Foci (MacNeish and Capes 1958).

Pottery associated with Besant-Sonota in Manitoba archaeological sites has not been prolific. Despite the size of the sample, the sites excavated by the author have been satisfactorily associated with Besant-Sonota. The number of rims and body sherds recovered have been very limited. The pottery sample recovered consisted of both cord-roughened and smooth sherds. Incised sherds have also been identified and have shown a close correlation with coeval Laurel. Unfortunately, no punctates and dentates were identified in the Besant-Sonota assemblages. Correlations in ceramic characteristics have been identified in a number of other sites also with very limited sample sizes.

## **5.0 Besant-Sonota Pottery-Bearing Sites in Saskatchewan and Alberta**

### **5.1 Introduction**

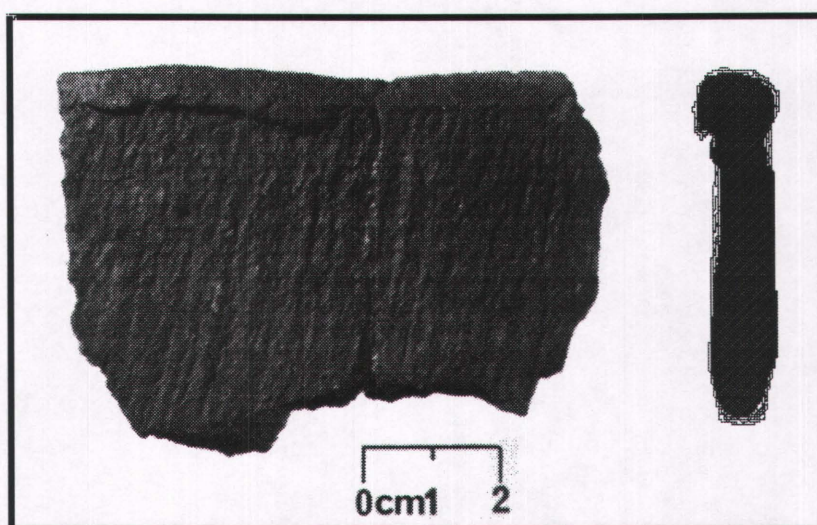
Both Saskatchewan and Alberta contain archaeological sites with pottery possessing attributes that bear characteristics similar to Besant-Sonota. Besant-Sonota pottery specimens have also been identified in archaeological surveys and in excavations and in major surface collections. A number of the systematically-excavated sites found in these two prairie provinces will be discussed in this chapter.

### **5.2 Besant-Sonota Pottery-Bearing sites in Saskatchewan**

The Walter Felt site (EcNm-1), a bison drive, is situated on the breaks of the Missouri Coteau, south of Mortlach, Saskatchewan. The site was partially excavated in the summer of 1962 by the Saskatchewan Museum of Natural History. Five occupation zones were identified, each separated by sterile levels (Kehoe 1964:51). Level 13 was the lowest and earliest domestic occupation identified. The artifact assemblage included Besant points, knives, scrapers, utilized flakes, and pottery. The level was considered to contain the first definite association of pottery with Besant points. A charcoal sample from the level yielded a radiocarbon date which conformed to other known Besant sites of the period (Kehoe 1964:51). The ceramics were comparable in age to Woodland pottery.

From the ceramic specimens two vessels are represented. The first vessel consisted of a rim sherd and 19 body sherds with a coarse surface texture without luster, the clay containing a moderate

quantity of feldspar particles, 0.5 to 2 mm in diameter (Kehoe 1964). According to Kehoe (1964) patches of clay were added during the construction of the vessel and paddled with an instrument wrapped with uneven thongs 0.25 to 2 mm wide. The rim of the vessel is straight and plain, rolled over on the interior and slightly flattened, overhanging on the exterior and rolled toward the interior (Figure 5.1). The wall thickness of the vessel was 6 mm at the rim and increased to 8.5 to 10 mm at the neck which is consistent with Kehoe's (1964) observations. The vessel shape could not be determined, but there was no indication of either a shoulder or a basal angle, or anything but a rounded base

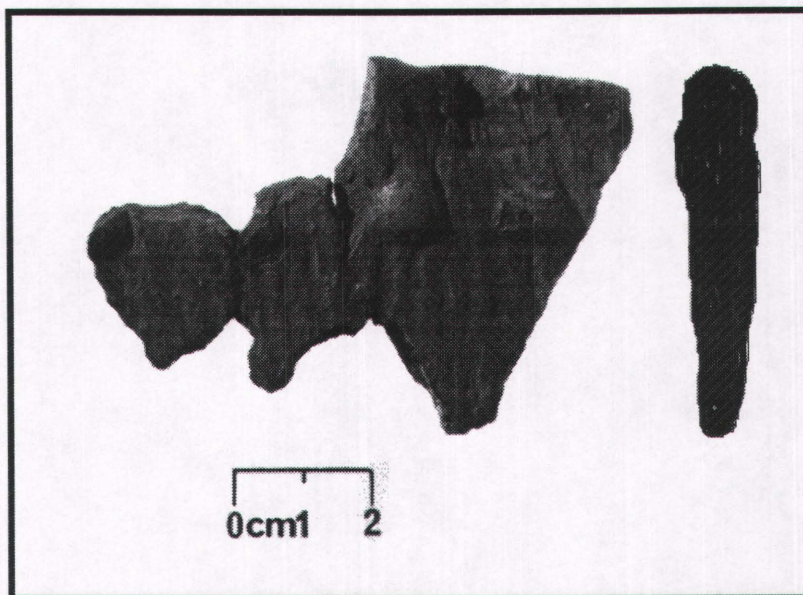


**Figure 5.1** Walter Felt Cord-roughened rim sherd with overhang on exterior and rolled over on the interior

The second vessel was represented by five body sherds with paste and surface smoother than the first vessel. It had no luster and sparse feldspar temper, 0.5 to 1 mm in diameter (Kehoe 1964). Construction of the vessel resembled the first. However, Kehoe initially did not describe the rim sherd in full detail. The rim sherds



were decorated with a row of bosses which were produced by round interior punctates (Meyer et al. 1991) (Figure 5.2). The paddle used in construction was described by Kehoe (1964) as wrapped with s-twist cord 0.75 mm thick, spaced 4 mm apart, and the walls of the vessel are 6 mm thick.



**Figure 5.2:** The Walter Felt rim sherd with a row of bosses.

This site has become recognized as containing the first systematically excavated examples of Besant-Sonota pottery on the Canadian Grasslands. Neuman (1975:82) stated that the sherds resembled most Sonota Complex and Plains Woodland ceramics in having cord-marked exteriors and shoulderless vessel profiles. Neuman, however, observed that the clay overhang on the lip interior of the Walter Felt site rim seemed "foreign" but did not further comment on it.

The Garratt site (EcNj-7) was discovered by Paul Garratt who found cultural material in garden property converted into a park by the City of Moose Jaw (Morgan 1979). The site is located in the

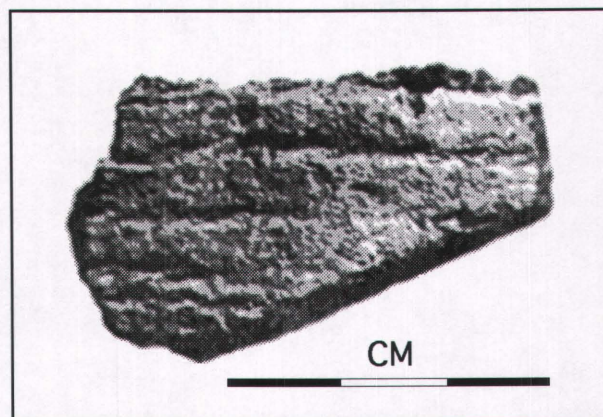
southern section of the city, on an alluvial flood plain of Moose Jaw Creek. During the 1966 and 1968 field seasons four units were excavated and in 1969, four test pits were added to determine spatial continuity of the occupational levels (Morgan 1979:76). The multicomponent site represented cultural traditions that correlated with the chronological sequence established for the Northern Plains.

Level 8, the earliest cultural-bearing horizon, was recognized as a Besant occupation where four body sherds and one rim sherd were recovered (Morgan 1979:90). Morgan (1979) describes the surface finish of two sherds as obliterated by smoothing, with the thickness ranging between 9.5 to 9.9 mm. (mean 9.7 mm). The other two body sherds were cord-impressed, with the cords approximately 1.5 mm in diameter and spaced 4.2 to 5.0 mm apart with no smoothing observed (Figure 5.3). The cord impression was stated to be constructed from a minimum of two strands wound clockwise with no smoothing observed (Morgan 1979:380). The single rim sherd was described as being straight with an insloped lip 8.2 mm. thick and flattened with an overlap to the exterior surface. The texture was coarse and crumbly with a surface finish that was obliterated by smoothing (Morgan 1979:380-1).

No lithic diagnostics were uncovered in level 8 of the Garratt site; however, Morgan (1979; 219) stated that a strong stratigraphic correlation existed between the pit in which the sherds were recovered and the main excavation units which suggested a representation of the Besant Phase. The sherds recovered were believed to be comparable to Reeves' description of Besant ceramics and correlating with the ceramics from the Walter Felt Site. Morgan



(1979:219) and Dyck (1983:12) have accepted sherds from Level 8 at the Garratt site as Besant. Syms (1977:92) stated that the form and decoration resembled Sonota pottery more closely than Valley Cord-roughened pottery.



**Figure 5.3:** Sample sherd taken from the Garratt site (Morgan 1979: plate 61)

The Crane site (DiMu-93), identified during a Heritage Resources Impact Assessment for the Rafferty Reservoir construction project in 1986, is a deeply stratified site (Gibson and McKeand 1992:3). This multicomponent site had not been significantly impacted by the natural environment; however, human disturbance was reported to have affected the site in the form of cultivation, a municipal gravel road, and an abandoned railroad and trestle next to the site (Gibson and McKeand 1992). The diversity of associated artifacts and features found at site suggests that it was primarily used as a campsite. Its sheltered nature is reported to abound with berries, firewood and water while the level terrain is thought to have influenced human habitation for several millennia (Gibson and McKeand 1992:3).

A test trench was opened and a 4 x 7 m block which was excavated in 5 cm arbitrary levels revealing a series of stratified Besant components 80 to 110 cm below the surface. Occupation 7 encapsulated levels 14, 16 and 17 and produced thirteen stone tools consisting of two projectile points, one end scraper, a biface fragment and nine retouched flakes, all but one composed of Knife River flint (Gibson and McKeand, 1992:34). In addition, Knife River flint composed over 75% of the debitage.

The pottery was reported to consist of fragmented body sherds recovered in two high-frequency and two minor frequency clusters in level 16. No neck or rim sherds were recovered to define and describe individual vessels (Gibson and McKeand, 1992:35).

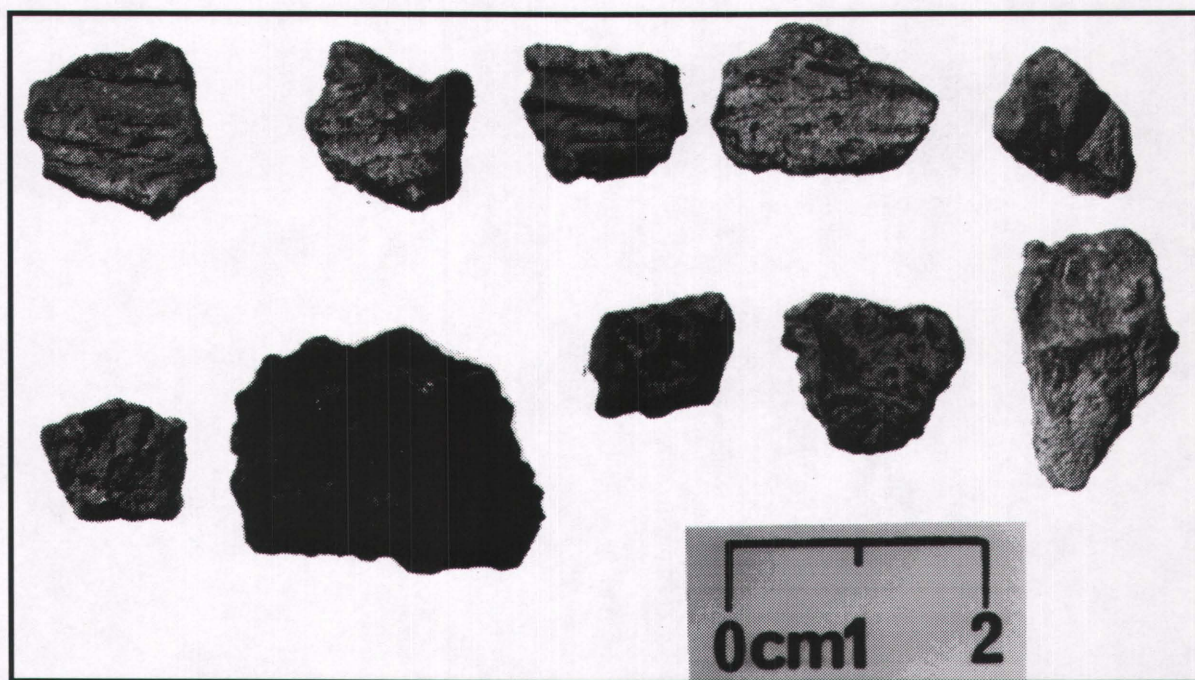
According to the report, one vessel was represented by over 150 very thick body sherds with the curvature of the largest sherds suggesting that the vessel was approximately 20 to 30 cm in diameter. The vessel's paste was described as dense and contained small amounts of granite temper. Some sherds were moderately consolidated with a tendency to exfoliate on the exterior and interior. Many sherds were described as being oxidized; however, the sherd profiles showed a dark, reduced paste at their core; others appear to have a uniform paste texture and colour (Gibson and McKeand, 1992:35).

The exterior of the sherds was noted to have a smooth corded finish with a smooth interior. As well, sherds with cord impressions that were smoothed over were identified. The body sherds were undecorated with the exception of one which was decorated with shallow, horizontal, parallel incised grooves over a slightly burnished



exterior. Most body sherds were unstained although some had black residue on their interiors (Gibson and McKeand 1992:35). Figure 5.4 is a sample of some of the Sonota- Besant sherds recovered from the Crane site.

Gibson and McKeand (1992) pointed out that occupation 8 encapsulated levels 18, 19 and 20 and was the most prolific of the excavation. Cultural materials were clustered in the vicinity of two hearths where almost 95 percent of the over 4,000 flakes were of Knife River flint. A white chalcedony flake and a few flakes of Swan River chert



**Figure 5.4:** A sample of cord-roughened and smooth body sherds recovered from the Crane site

were also found. A total of 103 stone items were manufactured from Knife River flint and six other tool items consisted of modified bone. A copper awl was also present. The majority of the items were described as expediency tools and scrapers such as retouched and

modified flakes. Seven knives and one ovoid biface were recovered along with eleven broken projectile points, eight complete enough to be identified as Besant (Gibson and McKeand, 1992:44).

The pottery recovered consisted of 17 pottery sherds. According to the descriptions, most were be fragmentary, making it difficult to determine paste characteristics. A few sherds had a black paste which had been densely consolidated and contained coarse granite temper. This find was insufficient to differentiate the sherds into separate vessels (Gibson and Mckeand, 1992:44).

Occupation 9 was reported to contain levels 22-24. The debitage was nearly 75% Knife River flint with lesser amounts of Swan River chert. Twenty stone tools were recovered, consisting of five projectile points, three knives, two scrapers, nine expediency tools and one indeterminate tool. Three of the projectile points were made of Knife River flint, one of Swan River chert and the other porcellanite. According to Gibson and McKeand (1992:59), only two were sufficiently complete to be identified as Besant.

Gibson and McKeand (1992) stated that nearly 100 of the sherds consisted of tiny unidentifiable fragments; however, out of the crumbs, one neck sherd and a number of body sherds were recognizable. According to the site report, no distinguishing marks except for the paste, which was highly friable, were noted and none appeared to be burnt in any way. The prime importance is that this pottery was found in association with Besant lithics at this occupation level. A number of the sherds had, on the exterior, a smooth corded finish with a smooth interior and some had cross cord impressions that were smoothed over. It was noted that a majority of the body

sherds were undecorated with the exception of one that was decorated with shallow, horizontal, parallel incised grooves over a slightly burnished exterior. A greater number of unidentifiable pot sherds were recovered. Most were reported to be fragmentary, making it difficult to determine paste characteristics except that they had a coarse granite temper.

The Bennett site (DjMw-27), located in south central Saskatchewan, was identified when a Pan Canadian Petroleum pipeline was broadened. Monitored by Saskatchewan Research Council archaeologists, cultural material was recovered from the spoil pile (Finnigan 1985). Pottery was retrieved from the backfill but not reported to be recovered during the monitoring process. Archeological concerns focused attention on the previously recorded Bennett Butchering site (DjMw-27).

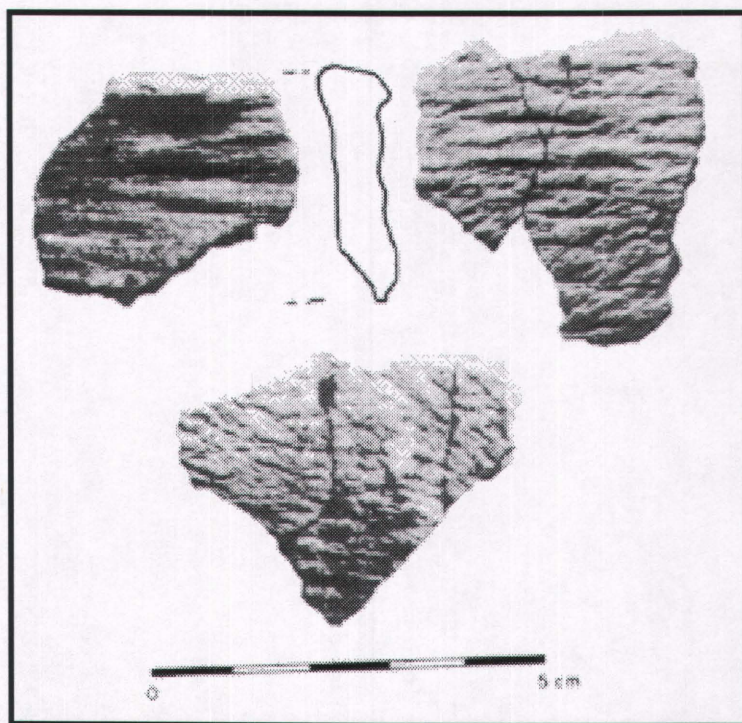
The Bennett site was initially identified from a cutbank along the Souris River and contained two or more cultural horizons with one containing pottery. According to the report a cultural resource management investigation resulted in a 3x3 m test excavation. This was done because a number of ceramic sherds and butchered bones were recovered on the surface of a completed area on the repaired pipeline. The post-impact monitoring investigation of the trench revealed a Besant point, a rim sherd and seven body sherds. The dates bracket the time period of Besant-Sonota on the Northern Plain (Finnigan 1985:50).

The test units and spoil pile revealed a well-defined Besant occupation with a large number of pottery sherds, bone and debitage, three hearths, a triangular projectile point (Meyer et al. 1991). The



pottery recovered from the site may have represented a single vessel, however, given the linear spread of the spoil pile, it was suggested that more than one vessel was represented (Finnigan 1985:53). The rim sherd was rounded with an outward sloping lip with an interior cord-wrapped tool impression (Figure 5.6). The pottery was described as bearing prominent cord-roughened exteriors that were characterized by a dense paste (Meyer et al. 1990).

According to the report, the vessels were similar to Neuman's (1975) Sonota vessels. The only noted difference was that none of the sherds had punctates. It was concluded the site was a multiple Besant occupation important for the study of Besant-Sonota interrelations (Finnigan 1985:53).



**Figure 5.5:** Three pot sherds recovered from the Bennett site (Finnigan 1985). (Permission to use was granted by Jim Finnigan.)

### **5.3 Some Additional Sites in Saskatchewan to Consider**

The Long Creek Site (DgMr-1) was investigated by Mayer-Oakes and Wettlaufer in 1957 but the final site report was not completed until 1960. The site is located in the valley of Long Creek, a tributary of the Souris River southwest of Estevan. During the survey of the site, test pits revealed a pottery-bearing occupation level 22.5 cm to 32.5 cm below surface and seven-1.2 m sq. test pits and eight-2.8 m units were excavated. The site was excavated in both 7.5 cm levels and natural levels (Mayer-Oakes and Wettlaufer 1960:3-20). Eight different occupation levels were identified.

Level 3 was identified as being associated with the Besant occupation because of the four diagnostic projectile points that were recovered. Separation from the upper and lower occupations was stated to be quite pronounced. The cultural material is considered to belong undoubtedly to one level of occupation. Also found in this level were two tiny pieces of pottery which fitted together. The sherds were described as having a grit temper and a laminated texture with a well rubbed outer surface. It was suggested that they were no different than the thousands of others found in the first level. However, because of the stratigraphic position of level 3 and the above evidence this pottery was discounted as intrusive by Wettlaufer.

The Ratigan site (DhMs-10) is a large stone circle site in a coulee on the south end of McDonald Lake, 11 km northwest of the

town of Estevan, Saskatchewan (Rollans et al. 1992). This site was first identified when a heritage study was conducted by the Saskatchewan Research Council on behalf of the Souris River Basin Development Authority with the objectives of mitigating sites affected by the Rafferty and Alameda Dam construction (Rollans et al. 1992:6). In total, there were 106 stone circles and 14 cairns made up the site and spanned between Besant and the historic period. Three excavation grids uncovering 11 stone circles and over 23,000 artifacts (Rollans et al. 1992:6). Projectile points types were predominantly Besant and Plains side notched. A large sample of pot sherds were present with some that could be associated with Besant-Sonota (Rollans et al. 1992:6).

Ring 3, level 2 produced a plain undecorated rim and two undecorated body sherds affiliated with Besant-Sonota. In Ring 4, a total of 310 sherds were recovered which represented at least five different vessels. It was noted by Rollans et al.(1992) that all but one rim could have come from the same vessel. In total, 148 sherds were cord impressed while seven sherds were plain; however, 29 textile impressed sherds could not be assigned to Besant-Sonota.

In Ring 7, six rim sherds, two neck portions, 69 body fragments and four miscellaneous sherds represented 4 vessels. One is Late prehistoric. A miniature vessel with plain surface finish and almost no temper in the paste was considered as either Blackduck or Selkirk (Rollans et al. 1992). Other sherds which could fit within the Middle Plains Woodland association were described as generally having the homogenous, compact, blocky paste characteristics of Besant/Sonota ceramics (Rollans et al. 1992).

Three decorated rim sherds are described as having a precise inner corner angle to the lip and have exterior finger impressions (Rollans et. al 1992:32). However, one rim was described as having a smoothed textile impression on the exterior surface with smeared finger impressions as though a hand or some other instrument was drawn across the lip after the impressions had been made. The other two were described as having a plain surface finish. Several body sherds were reported to have a simple stamped surface finish but little can be said about the vessel form (Rollans et. al 1992:32). The plain-surfaced sherd was not believed to be part of the miniature vessel. It was seen as being different from the plain decorated rim sherd and was described as almost having a burnished finish which is stated to be unusual for Middle Plains Woodland pottery (Rollans et. al 1992:32).

Ring 26 produced 14 sherds which appeared from the paste, to be Middle Plains Woodland. One rim sherd and five body sherds were identified. The sherds with definable surface finish were textile impressed. A single fine cord impression unusual to Besant-Sonota pottery was singled out from the miscellaneous sherds. Three body sherds and three miscellaneous sherds were recovered from Ring 30. The descriptions state that the sherds with identifiable surface finish were plain. Two vessels were apparent considering the variety in pastes (Rollans et. al 1992:33).

Ring 37 contained a larger number of plain surface finish sherds found to be of limited value for interpretation because of their small size and absence of rim sherds. The report stated that two vessels were believed to be present. A shoulder sherd was too

prominent for Besant pottery and awkward for Mortlach. It was suggested that it may be a representation of pottery types more likely to occur with Prairie Side-Notched points.

Ring 66 produced three small sherds of pottery, all with plain surface finish. Ring 69 produced six pottery sherds, five were described as plain and one had a textile-impressed surface finish. Three sherds were recovered from Ring 73, and were described as having a plain surface finish.

A total of 393 pottery sherds were recovered from Ring 94 with the collection comprising at least seven vessels (Rollans et. al, 1992:47). In total, 19 cord impressed and nine plain sherds were considered to be Besant-Sonota.

One vessel was recognized by the abundance of rim sherds which shared the same paste and decorative characteristics. The decoration was described as a parallel diagonal fingernail impression on the rim exterior and vertical deeper impressions made with a blunt instrument. The exterior surface was described as being heavily smoothed textile or vertical cord-roughened impressions. Because the rim profile narrows to the lip it was thought to be characteristic of a Besant/Sonota vessel. It was concluded that the cultural characteristic remained unclear due to the amount of decoration on both sides of the rim which was considered too busy for Besant. A miniature vessel was represented in this collection as well.

According to the report, the obvious Besant vessel from Ring 94 is represented by thick, heavy horizontal cord-roughened sherds. The vessel is represented by three rim sherds, two decorated neck



sherds and a number of body sherds. According to the description, the vessel was decorated with cord impressions straight across the 7.7 mm thick lip (Rollans et al. 1992:47). Punctates were also reported to form exterior bosses which are visible on the interior of the neck and are about 14.8 mm apart and 11.4 mm from the rim. The neck is described as being quite curved, which is thought to be unusual for Besant/Sonota vessels (Rollans et.al, 1992:47). The remaining neck and body sherds recovered from this ring are believed to be associated with later period ceramics.

It is considered that all the cord-roughened sherds are Middle Plains Woodland Besant-Sonota pottery which represent at most, two vessels. The rims are described as having a square profile with a vertical cord impressed outer surface and horizontal cord impressed interior surface. The pottery is thought to be similar to Neuman's (1975:93) descriptions (Rollans et. al, 1992).

The Biggar Bone Site (FaNx-3) is located near the town of Biggar in west central Saskatchewan. This site was known to the local archaeological society since the late 1960's when a farm access road was constructed through it. Numerous projectile points, stone tools and potsherds were collected. The ditch profile exposed a rich occupational level in 1978 when a road through the site was widened. The local archaeological society members asked the Saskatchewan Museum of Natural History to assist in the test which revealed the presence of an extensive occupation level with much bone and artifacts consisting of a Besant point and body sherds and a rim sherd which was described as having a smooth, undecorated lip (Meyer et al. 1991).

Three ceramic sherds were reported to be unearthed at the Fitzgerald site, a Besant bison pound and processing area near Saskatoon (Hjermstad 1996:1). The sherds were small, 6-12 mm in diameter made of a gray clay tempered with small amounts of quartzite grit. There was no description of the sherd thickness. A piece of daub was also recovered, suggesting that pottery may have been manufactured there or that it may have been a gaming piece, a test piece for firing or for decorating a vessel (Hjermstad 1996:81).

#### **5.4 The Alberta Sites**

The Ross Glen Site (DIOP-2) is located within the city limits of Medicine Hat, Alberta. This stone circle site was excavated in 1981 by J. Michael Quigg as a Historical Resource Impact Assessment on a housing subdivision project. A surface and subsurface investigation located two precontact and one historic occupation. The site of interest consisted of 18 partially buried stone circles. Recovered were thousands of pieces of lithic debitage and fire-cracked rock. A minimum of 42 ancillary features, hearths and lithic concentrations were identified. Two Besant projectile points and one endscraper were collected from the surface during the initial site discovery.

According to the report, 37 sherds in total were recovered from Stone Circle 14. Two general excavated areas were identified against the eastern margin of the stone circle, in association with feature 33, where 35% were recovered and along the western and northwestern periphery of the circle, where 65% of the sherds were recovered. Approximately 89% of the sherds were recovered inside the stone circle.

The pottery was described by Quigg (1986) as consisting of relatively small body sherds that ranged from 6.2 to 24.0 mm in diameter. The sample did not contain any lip, rim or neck sherds (Figure 5.7). In addition, 73% of the sample was found to be fragmentary and showed angular fractures; several were also exfoliated. The edges of broken sherds also appeared to be weathered, indicating exposure subsequent to their original breakage (Quigg 1986).

Quigg (1986) described individual ceramic sherds as appearing to be well bonded with some exhibiting laminations. In addition, the temper consisted of angular, unweathered fragments of quartz and feldspar estimated to comprise 10-15 % of the sherds' volume. Quigg (1986:121) also stated that the internal structure, temper characteristics, and surface treatment indicated that only one ceramic vessel was represented. As well, Quigg (1986:121) described the exterior of the sherds as having minor undulations and shallow striations. The undulations were stated to resemble cord impressions thought to be caused by smoothing before firing.

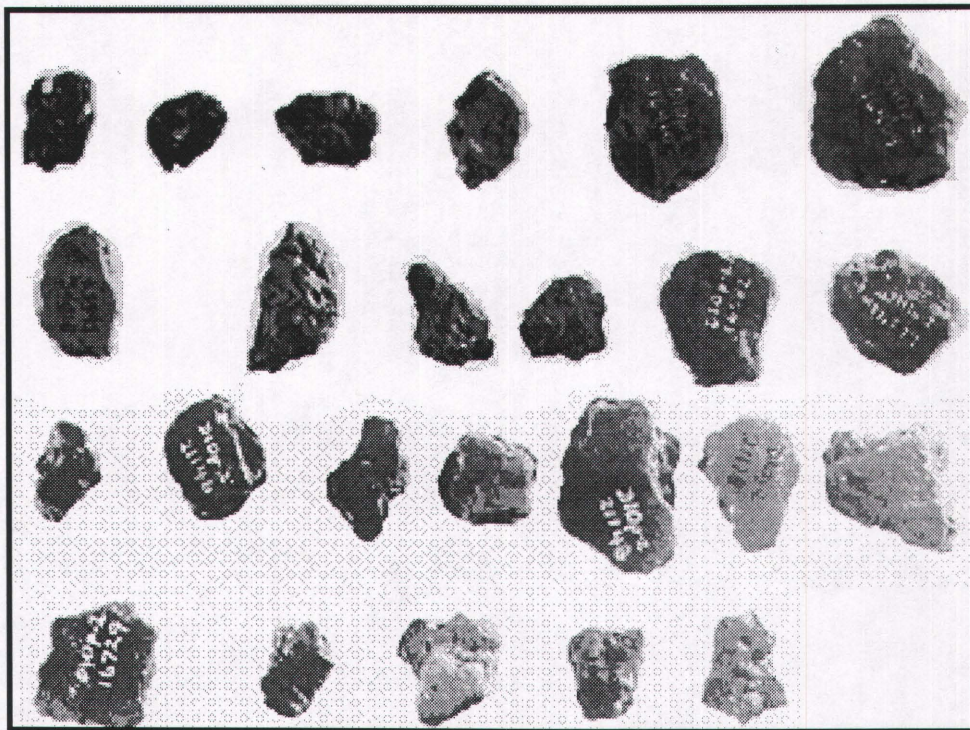
Due to the small sample size and the small size of the sherds, Quigg (1986) could not determine if the undulations were formed from fabric impressions or cord-wrapped-paddling. Also absent in the sample were decorations such as punctates or grooved lines. There were no interior decorations found on the sherds. The interiors of the sherds were smoothed with isolated occurrences of shallow striations. It was postulated that the striations were made during interior surface smoothing.

sand inclusions and of feldspar and quartzite temper suggest that two vessels may have been present. A plain surface finish was found to be similar on all sherds. Other Sonota association includes site DjOn-8 as reported by Brumley et al. (1981:68-69, 240-242, 379-382).

## **5.5 Summary**

The Walter Felt site pottery resembled most Sonota Complex and Plains Woodland ceramics. At least two vessels were represented and had cord-roughened exteriors. The clay overhangs are unusual for Sonota Besant. However, some rims in the Manitoba parkland also had clay overhangs as discussed in the previous chapter. The earliest cultural horizon at the Garratt site was recognized as the Besant level where five pieces of pottery were recovered. Both smooth and cord-impressed sherds were recovered. These sherds correlated with Walter Felt pottery. The Ratigan site consisted of a number of stone circles that contained Sonota Besant wares. However not all ceramics recovered were Besant-Sonota. As well, both smooth and cord-roughened sherds were recovered. The Crane site which was multicomponent also revealed a number of pottery specimens associated with Besant-Sonota. Both cord-roughened and smooth sherds were identified. There are a number of sites on the southern Saskatchewan grasslands that have been considered in the assessment. However, they contain a very limited number of sherds. In Alberta two pottery-bearing Besant-Sonota sites have been identified. The Ross Glen site was the more prolific of the two and has been systematically-excavated. Some of the stone





**Figure 5.6:** Potsherds discovered at the Ross Glen stone circle site. Photo from Quiggs' (1986) site report (Permission to use granted by Archaeological Survey of Alberta director, Jack Ives).

Quigg (1986:121) found that comparisons of the Ross Glen site assemblage with other published references was difficult because of the small sample size. The association of Besant was made because projectile points were found in association with ceramics in level 1 of Stone Circle 14.

Another site to consider in Alberta as a possible Besant-Sonota pottery-bearing component is EhPc-105. This site is located on the northern escarpment of the Wintering Hills and has been identified by Loveseth (1983) as a site that contains Besant phase ceramics (Vickers 1986 :84). The only diagnostic associated with this site has been identified as a Samantha side notch (Besant phase) point. This site has been documented have produce 34 sherds, according to Reeves (1983:63). The sherds are small and differing percentages of

circles contained small body sherds which resembled cord-impressed sherds. The latter site, EhPc-105, is a site that deserved mention due to the samples recovered. This is an indication the Besant-Sonota ceramic technology extended across southern Saskatchewan and as far west as eastern Alberta.

## **6.0. Sonota-Besant Pottery-Bearing Sites in Northern United States**

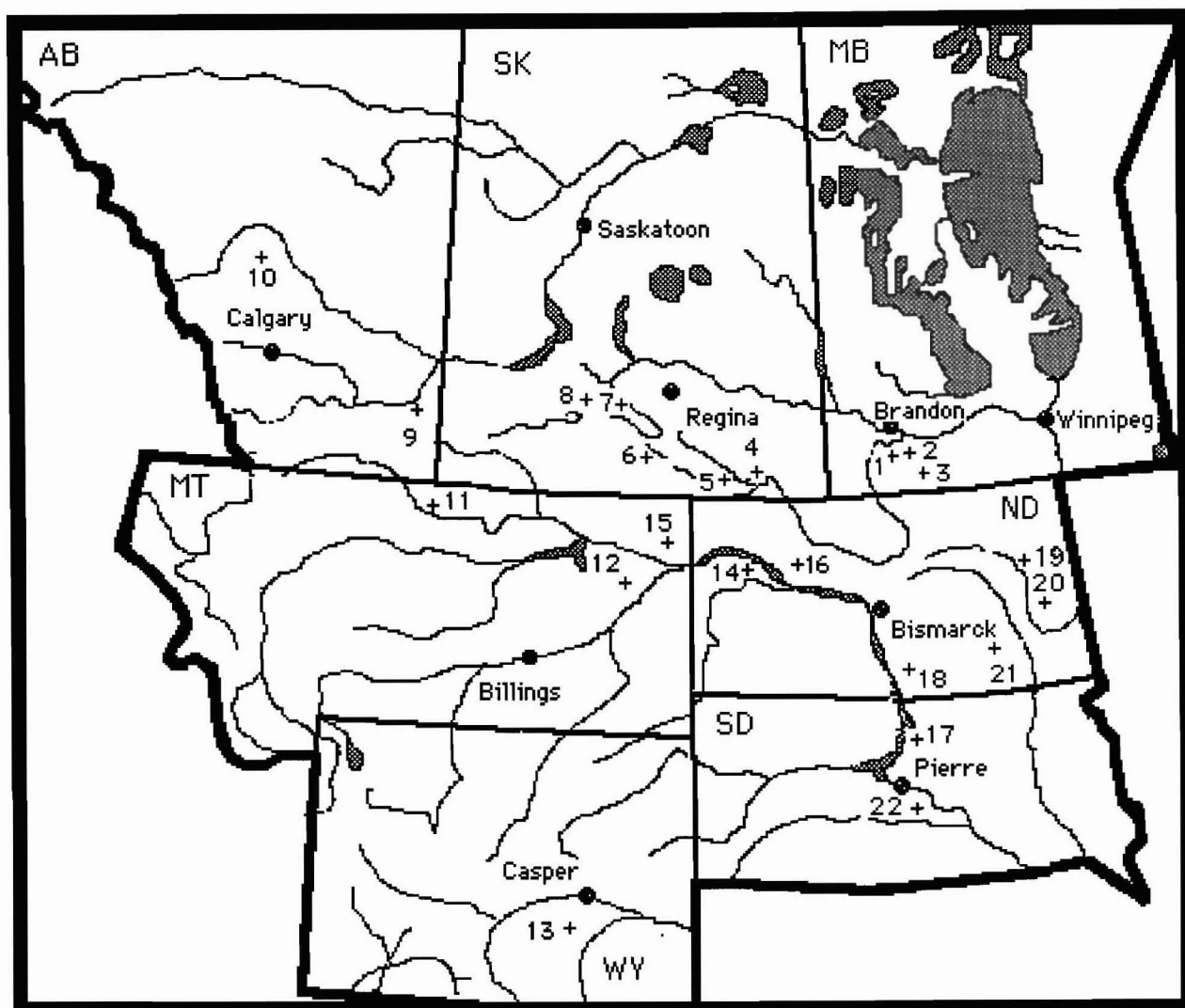
### **6.1 Introduction**

The great majority of Sonota-Besant pottery-bearing sites have been unearthed south of the 49th parallel. Sonota sites with pottery were first excavated along the Missouri River in the Dakotas as a result of a mitigation project. Some related sites also turned up in eastern Montana. Woodland pottery was also found along the Wyoming-Nebraska border and in northeastern Colorado which closely resembled the Sonota pottery found in the Missouri River region. The characteristics of these pottery-bearing sites are comparable to Sonota-Besant sites found on the Canadian grasslands. Figure 6.1 is a map showing the locations of many of the Sonota-Besant sites found on the Northern Plains of the United States and includes the sites found on the Canadian grasslands.

### **6.2 Neuman's Besant-Sonota Pottery-Bearing Sites**

The Stelzer site (39DW242) is the type site for Sonota pottery and was one of a number of sites investigated by Robert W. Neuman (1975) between 1950 and 1956. The site is located along the bank of the Missouri River in the Oahe Reservoir area of South Dakota. It was also the first time burial mounds were found in direct association with the campsites of the people who constructed them and was considered to be one of the largest known or reported sites on the northern Great Plains during this time period (Neuman 1975:3).





**Figure 6.1 :** Sonota-Besant Pottery-Bearing sites on the Northern Plains. (1) *Pinew Watchi*, (2) *Wapiti Sakihtaw*, (3) *Nahastewin* (4) Ratigan, (5) Crane, (6) Bennett, (7) Garratt, (8) Walter Felt, (9) Ross Glen, (10) EhPc-105, (11) *Wahnkpa Chu'ng*, (12) Whiskey Hill, (13) Butler-Rissler, (14) High Butte, (15) 32MZ2, (16) 320L270 (17) Stelzer, Grover Hand, Arpan Mounds, (18) Alkire, Boundary Mounds, (19) Baldhill Mounds, (20) Naze, (21) Schmidt Mounds, (22) La Roche House.

The pottery at the Stelzer site consisted of 15 rim sherds and 75 body sherds. The distinguishing criterion for the pottery used by Neuman (1975) was the exterior finish which was either plain or cord-roughened. The main decorative element was comprised of a



line of punctates and only one group was characterized by dentate stamping in combination with punctating. The vessel forms were conoidal with no evidence of coiling. Laminations visible in the core of one of the rim sherds was reported to suggest that the vessel were formed by using the paddle and anvil technique (Neuman 1975:33).

According to Neuman's (1975) descriptions, the lips on most vessels were rounded. He stated that the paste of restored rim sections was heavily tempered with grit particles probably obtained from poorly consolidated granite fragments found commonly at the site. The texture was described as being quite coarse; the paste was uncompacted and friable with extremely ragged fractures. The temper particles were reported to protrude onto the wall surface.

Neuman (1975:33) stated that all the pottery, except plain surfaced sherds, was cord marked on the exterior surface and sometimes on the interior lip for a short distance down. In some groupings, it was stated that cord-markings were parallel to each other and vertically or diagonally oriented in the rim area and horizontally oriented on the body below. The cord marks in some groupings were described as vertical near the lip, but as criss-crossing on the body. The decorative techniques were reported to consist of a row of punctates executed in several simple patterns on the rim of the vessel. The punctates varied in size and had enough depth to cause slight bosses on the surface of the opposing wall. Also found were alternating interior and exterior punctates. Sherds from one group were described as being embellished with perforations and dentate stamping (Neuman 1975:33). Figure 6.2 on the following

page contains photographs of the sherds from Neuman's (1975) report on Sonota pottery.

Neuman (1975) stated that most of the ceramic groupings from the site exhibited little to differentiate them from some previously described pottery types pertaining to Woodland sites in the central plains and in South Dakota. However, according to Neuman (1975) the sherds with plain smooth exterior surfaces and decoration did contrast sharply with other Woodland ceramics of comparable age and cultural association in the region.

The final interpretation made of the site by Neuman (1975) was that it was occupied intermittently over a long period of time by small groups of people hunting and gathering. He stated that bison played the primary role in subsistence and there was a lack of evidence to support horticultural activities.

The Grover Hand site (39DW240) situated downstream of the Swift Bird mound, was discovered in 1951 and in 1952 three mounds were excavated with two producing pottery (Neuman 1975:47). In Neuman's (1975:47-58) report, Mounds 2 and 3 were dated in the 200 to 300 A.D. range. The specimens from the mounds were reported to consist of one rim and four body sherds.

According to Neuman (1975), the rim contained large particles of igneous rock measuring up to 5 mm across and the paste consisted of silt and sand. In addition, the rim was described as cord paddled on the exterior and lip top with the impressions parallel to each other and averaging 1.5 mm in width. The lip top was described as being flat but the exterior was rounded and projecting over onto the

wall of the rim. Neuman (1975) also described the rim form as slightly flared and the lip top as beveled exteriorly.



**Figure 6.2:** An example of Neuman's "Stelzer" body sherds (Neuman 1975:149; reproduction with author's permission).

Punctates on the rim exterior were reported to measure 7 mm in diameter and were 25 mm below the lip top. The specimen was also described as being 14 mm thick at the lip and 11 mm below. The specimens according to Neuman (1975) closely related to the rims at the Stelzer site.

One of the bodysherds was described as a piece from near the rim. It was tempered with large grit ranging up to 4 mm in size. In addition, the specimen had a slight outward flare and the walls were smooth. The sherd also had minute scallops considered as part of the decoration, which are less than 2 mm wide and 4 mm apart. This sherd was 7 mm thick and was recovered from the burial pit fill.

Body sherd two recovered from the mound fill, was comparable to the rim sherd, but was 12 mm thick. The third body sherd was 7 mm thick and tempered with fine igneous rock particles while the exterior was simple stamped and smoothed (Neuman 1975:50). The fourth specimen was 10 mm thick; a grit-tempered body sherd with particles up to 4 mm in size. The walls were also described as smoothed. It, too, was recovered from the burial pit fill.

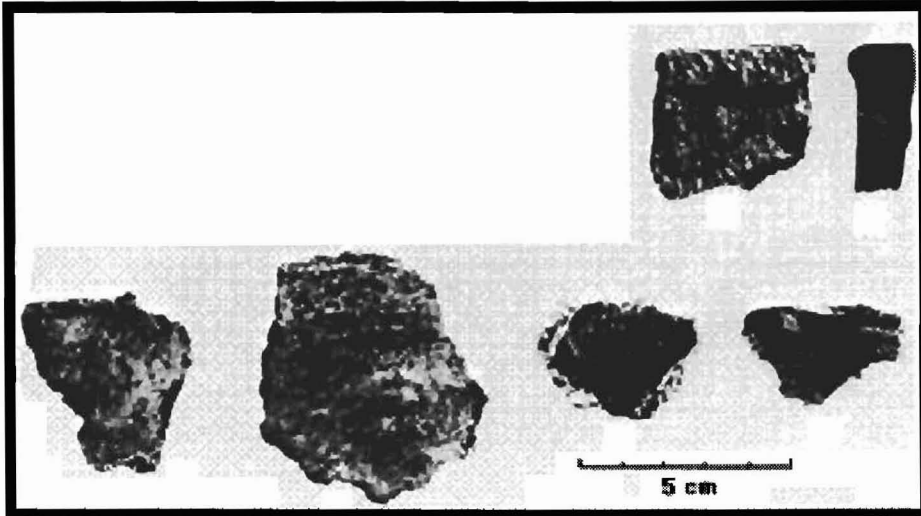
According to Neuman (1975:52), mound 2 contained the fourth body sherd which was tempered with a large number of granite particles ranging up to 4 mm in size. The paste was poorly consolidated and the sherd was 10 mm thick. It was also recovered from the mound fill as was a clay pipe. The sherds recovered from this site by Neuman (1975) are illustrated in Figure 6.3.

The Arpan Mound Site (39W242), identified in 1953, consisted of three mounds located approximately 1.5 km from the Grover Hand site. According to Neuman (1975) the site was excavated in 1955 and among the artifacts recovered was a fragmented pottery vessel exposed on the floor of the burial pit. This distinctive pottery type was called Arpan punctate because no other of similar type was found in the area (Neuman, 1975). Radiocarbon samples from timbers in the burial pit were dated at 1900 B. P. +/- 90 years



(Smithsonian Institution Number 167) (Neuman 1975:53).

Haberman and Travis (1995:73) verified the dates at 1850 B. P. and 1790 B.P. for the Stelzer site.



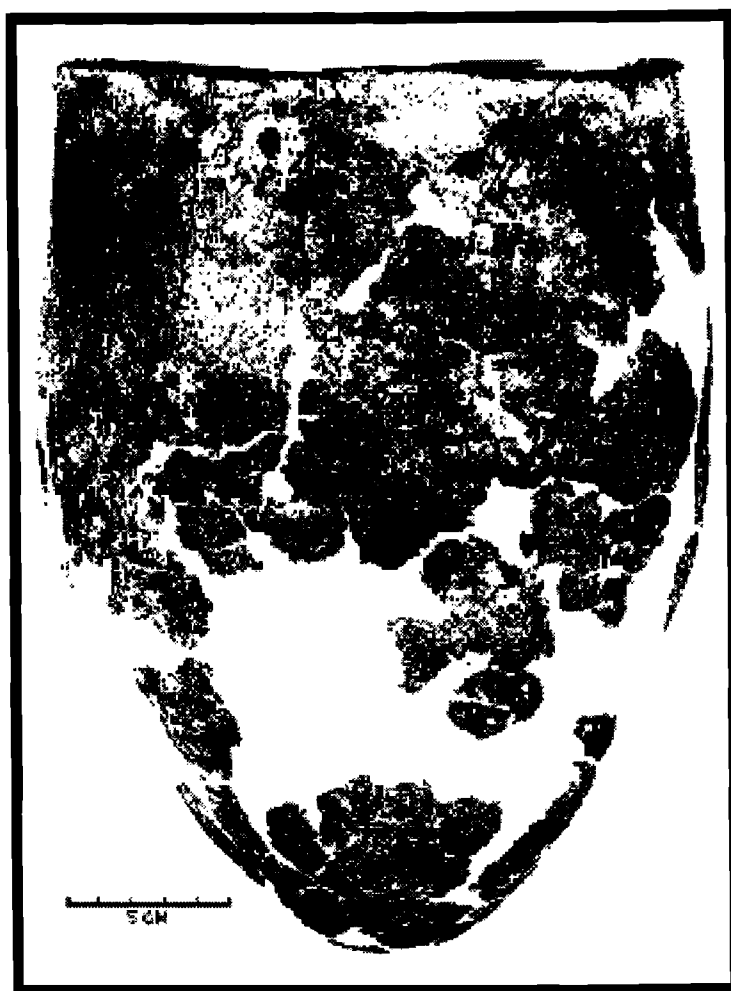
**Figure 6.3** : Grover Hand sherds (Neuman 1975:173; reproduced with author's permission).

To summarize Neuman's (1975) descriptions of the vessel, the temper in the paste consisted of moderate amounts of grit particles no larger than 3 mm in size with paste texture described as uncompacted and friable with extremely ragged fractures. Neuman (1975:53) stated that depressions usually caused by anvils and paddles or by coiling were not evident. In addition, the vessel form was described as being conoidal with flattened lip surfaces that sloped downward toward the exterior. Neuman (1975) described the interior and exterior surfaces as smoothed and decorated with a single row of exterior punctates that extended horizontally between 18 mm and 24 mm below the lip with punctates averaging 15 mm in diameter and 15 mm to 25 mm apart causing faint bosses on the interior. According to his measurements, the lips ranged from 7 mm

to 11 mm in thickness and when the Arpan vessel was restored it measured 26.3 cm. in height and 20 cm in diameter with an 18 cm orifice and a capacity of 4 l (Figure 6.4).

Indian Hill (32MZ2), is a pottery bearing site that was reported by Wood in 1955. The site is situated on a steep prominence overlooking the Missouri River southwest of the town of Williston, North Dakota. Fragmented bone, lithic flakes and stone tools were recovered. The latter included two projectile points, a variety of end scrapers, and some possibly utilized flakes. Unfortunately, the diagnostic style of the projectile point was not determined when the report was written.

According to Wood's (1952) descriptions, the first pottery sample was a rim sherd with coarse paste with angular particles of sand (Figure 6.5, a). The surface texture was rough and the clay compact with tendencies to cleave horizontally. The rim exterior was horizontally cord-roughened, the cord having an "S" twist 1.5 mm in diameter. Fine vertical cord roughening was also reported on the interior of the rim. Punctates were also found on the rim exterior and were 10 mm wide and 7 mm deep, creating bosses on the interior. This punctate row is 25 mm from the lip and the lip form is beveled to the exterior at a 45 degree angle. Protrusions were reported to be a result of cord roughening applied diagonally to the lip. According to Wood's (1952) measurements, the vessel was 5 mm at the lower end of the vessel and 10 mm at the lip or rim.



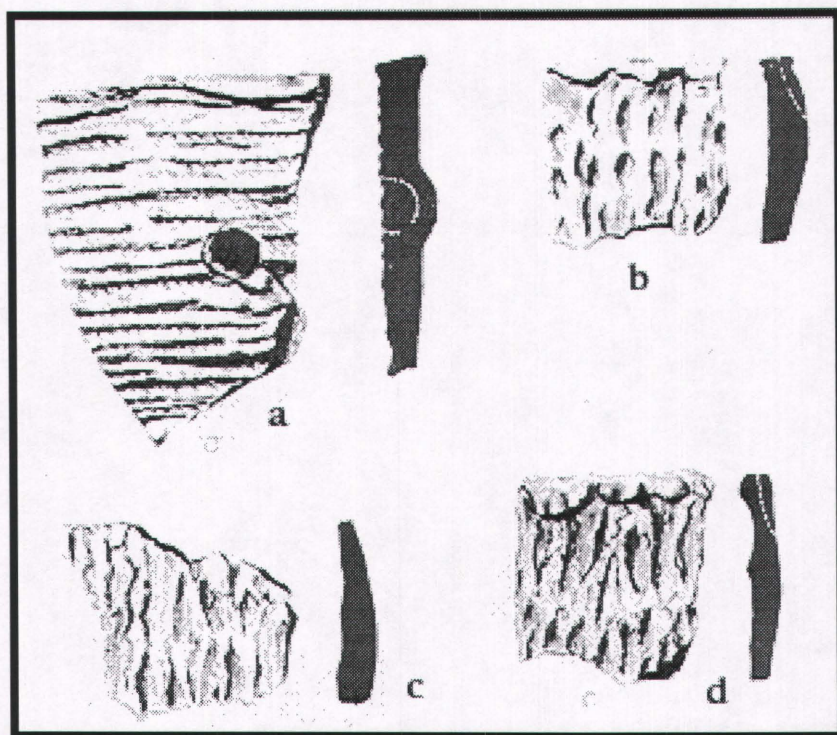
**Figure 6.4:** Illustration of the Arpan Punctate vessel recovered from burial pit 1 (Neuman 1975:189; reproduction with author's permission).

Wood's (1952) sample B consisted of 2 rim sherds (Figure 6.5, b, c and d) from one vessel with a paste temper that contained small particles of sand, 5 mm in diameter. The clay was rough with breakage in straight lines with crumbly edges. The rim exteriors were vertically cord-roughened. Some cord roughening was also present on the lip surface. The coarse cord used on the rim was so superimposed that the twist direction was not distinguishable.

Wood thought that decoration on the inner rim was applied with a triangular tool wrapped with a flat, narrow material resulting



in impressions that were V-shaped in cross section. The deepest impressions were near the lip and decreased in depth as distance from the rim increased. According to his description, the lip form was flat to rounded with some bevelling on the exterior. Protrusions were also described in some as resulting from cord roughening applied to the lip, while the rim profile was described as excurveate. In addition, the neck was constricted and the rim joined the shoulder with a small curve. The thickness was reported to be 5 mm at the lower rim and 8 mm at the lip.



**Figure 6.5:** Indian Hill sherds from Neuman (1975:209; reproduction with author's permission).

The report stated that 21 body sherds were also recovered. All the sherd exteriors were cord-roughened in parallel or random order. The cords used were thought to be large and fibrous with an indistinguishable twist. The cord impressions on the exterior



averaged 1.5 mm in width and the thickness ranged from 5 to 9 mm. The interiors of the sherds were smooth with some striations and finger impressions visible.

The La Roche site (39ST9) was located along the Missouri River approximately 30 miles south of Pierre, South Dakota. The artifact inventory from house two included pottery which consisted of rim and wall portions of a single, shoulderless vessel and a rim sherd from another (Figure 6.6). The rim and wall portion was described as being comparable to ceramics from Stelzer. The projectile point specimens also bore a close resemblance suggesting a close relationship between the two sites (Neuman 1975:83). Neuman (1975) stated that it was quite probable that House 2 was built by people affiliated with the Sonota Complex.



**Figure 6.6:** La Roche site sherds from Neuman (1975:207; reproduction with permission of author).

### **6.3. Other Related Sites in the Dakotas**

The Natchke site was first identified in 1952 and named by the farmer who found it. In 1981 Ann Johnson uncovered a long forgotten manuscript by Richard Wheeler who tested the site in 1953. She added the summaries and interpretation of the findings in accordance with a modern and generally accepted taxonomic system. It was stated that several stratified sites once identified along the Oahe reservoir have long since disappeared. This particular site is located within the Cheyenne River Indian Reservation, Dewey County South Dakota (Wheeler and Johnson 1985:81).

Wheeler and Johnson (1985:85) reported that pottery was recovered along with lithics and faunal remains associated with a hearth feature. The pottery assemblage consisted of five sherds that were combined with twelve sherds from a former collection. The paste was described by Wheeler and Johnson (1985:85) as containing moderate amounts of fine coarse, sub-angular grains of sand and angular fragments of quartz crystal and granite. According to the descriptions, the temper ranged from 1 mm to 4.8 mm in diameter and averaged about 2 mm and the texture of the core was granular. The exterior was described as grayish to reddish buff, except where darkened by carbon. The core was dark gray and the interior surface black and occasionally encrusted with charred particles (Wheeler and Johnson 1985:85).

The report states that the vessel was probably made by lump molding, and then finished with a paddle and anvil. The exterior surface finish was covered with shallow and very shallow diagonal or, commonly, crisscrossed cord-markings. In addition, the cord had a tight clockwise ('S') twist. It was stated that on two sherds, the

cord-marking is partially obliterated by smoothing and the interior evenly smoothed. In further descriptions by Wheeler and Johnson (1985:88), the body was seen as elongated in form, with wall thickness ranging from 8.8 mm to 12 mm, mainly about 9.5 mm. The bottom was further described as being conoidal with the wall ranging from 10 mm to 11 mm in thickness.

Pottery from lens E was reported to include 2 rim sherds and 2 body sherds (Wheeler and Johnson 1985:89). The paste from the sherds was described as homogenous. The sherds, however, differed in colour, minor surface treatment and form. Wheeler and Johnson (1985) state that the pottery from this soil lens was comparable to other Plains Woodland sites. Sherds from the Indian Hill site near Williston, North Dakota (Wood 1955:22; Will and Hecker 1944:115-117) and from the Stelzer site near Mobridge, South Dakota were found to be similar.

The High Butte site is located a few miles south of the west end of the Garrison Dam in North Dakota and has been classified as a pottery-bearing seasonal occupation site dating within the Middle Plains Woodland period. A major Eastern Woodland affiliation was made on the basis of a turtle effigy found in association with the site (Wood and Johnson 1983).

Apart from the features associated with the site, the pottery sample consisted of 25 body sherds and five rim sherds, representing four vessels (Wood and Johnson 1983:35). The method of manufacture was thought to be lump molding because no traces of coil breaks were found. In addition, final shaping was accomplished with paddle and anvil. According to the more detailed description,

the temper consisted of rounded and sub-angular particles of sand, predominantly of quartz, and ranging from 1 mm to 3 mm across. Mica was also reported to be present and did not appear to be from crushed granite because feldspar was lacking. In texture, the paste was compact and well worked in the sherds of one vessel, while the body sherds were stamped with a grooved paddle. Rim and body sherds of other vessels had thick coarse paste.

Surfaces were described as being smooth and the temper did not protrude from the sherds. The surface finish was grooved or cord-wrapped paddled, creating stamped impressions. They were described as being partly smoothed over, leaving individual cords not especially distinct; however, z-twisting was noted. Most other sherds were smoothed as were the interiors.

Lip form was flattened due to decoration, a consequence of pressure applied. The rims were described as uniformly straight and may have been vertical, insloping, or outsloping. Body sherds were noted to vary considerably, from 4 mm to 15 mm thick. Conoidal bases or shoulders were not identified in the assemblage, but gentle concave-convex sherd cross sections were noted.

This site, according to Wood and Johnson (1983:55), contained one of the most characteristic features of Woodland pottery, which was a cord-roughened vessel surface, although some vessels were lightly or heavily smoothed. This report notes other sites in the region that were closely affiliated.

Site 320L270 is a Besant stone ring site located on the southern edge of the Missouri River trench in central North Dakota. Portions of the site were disturbed and destroyed by industrial construction.

The remainder of the site was within the impact zone of a proposed mining operation. A mitigation plan was initiated because of the site's potential to yield significant information on stone circle use and Plains Woodland occupations.

The ceramics recovered from the site appeared to be associated with the refuse dumps. Recovered was one simple stamped incised sherd from feature 1, a refuse dump in the peripheral rocks of ring 8. Other sherds, excluding rims and decorated pieces, recovered were cord-roughened and were classified as belonging to a 1,070 year old Plains Woodland site (Fredlund et al. 1985:132).

The Naze site (32SN246) is located at the confluence of Beaver Creek and the James River in eastern North Dakota (Gregg 1987a:3). The recovery consists of 328 sherds which including nine rims, two decorated and 89 undecorated body sherds, with 228 exfoliated or weathered sherds (Gregg 1987a:143). The nine rims were thought to represent at least seven vessels, one of which was described as being smoothed and the remaining as cord-roughened or smoothed over cord-roughened.

The paste of the vessels had crushed granite temper that averaged from 1 mm to 3 mm in diameter with sand being a natural constituent of the clay (Gregg 1987a:143). The vessels were thought to be fashioned by lump molding in conjunction with a paddle and anvil because no coil welds were evident. The surface treatment of the vessels was cord-roughened or smooth over cord-roughened. Some vessels were described as having a parallel vertical impression; others appeared to have criss-crossing grass or brushed impressions over cord roughening. The interiors of the vessels were smoothed.

The overall vessel form could not be determined, but was thought to be conoidal or subconoidal. The rims were described as out slanted and with round and flat lip profiles. The lip thickness ranged from 5.9 to 10.6 mm with the neck thickness ranging from 5.7 to 10.6 mm with an orifice diameter approximating 12 cm (Gregg1987a:143).

Four of the vessels were reported to display bosses with two being applied from the exterior. One vessel was reported to have tool impressions on the top of the lip.

The smooth exterior vessel had a compact paste with grit temper (crushed granite) ranging from 2 to 3 mm in diameter (Gregg 1987a:144). The method of manufacture could not be determined. The rim profile was straight with a rounded lip. The orifice diameter of the vessel could not be determined; however, the lip was 6.9 mm thick and the neck 7.9 mm thick.

Decorated body sherds consisted of sherds exhibiting single trailed lines 1.3 mm wide on a smooth or burnished exterior (Gregg 1987a:145). These sherds were reported to be quite distinct from the others and may have been derived from the upper levels. Dates for the Middle Woodland component range from 40 B.C.-A.D. 70 (Gregg 1987a:148). The characteristics of the pottery recovered at this level of the site were found to be comparable to that of the Sonota Complex. These Woodland sherds were also said to exhibit some similarities to Black Sand (Gregg 1995:25), a Hopwell pottery type.

The Highway 8 Site (32DU2) was a test excavation located along the Missouri River (Lake Sakakawea - Garrison Reservoir) north of



the town of Haliday in west central North Dakota (Good and Hauff, 1977:2). Nine body sherds and one rim sherd were recovered in this excavation. Several split and fragmented sherds of little use for analysis were recovered. The site produced simple-stamped, smoothed and cord-roughened pottery. The projectile points recovered from the site were of the Besant type. In addition, Nightwalkers Butte (32ML39), an adjacent site, contained similar sherds (Wood 1970).

#### **6.4 Montana and Wyoming Sites**

The Whiskey Hill Site (24DW1001) contained Woodland Pottery and Besant projectile points (Johnson 1977a:27). This site was located southwest of the town of Lambert in eastern Montana. This site, according to the author, posed problems in cultural classification because of the traditional way of thinking. Problems stemmed from making the distinctions between Besant and what was considered Plains Woodland. To the author, all was considered to be associated with Besant.

The sample of ceramics consisted of two rim sherds and five body sherds representing at least one vessel. The temper consisted of sub-angular to rounded particles of quartz, ranging in size from 9.5 to 2.5 mm in diameter. Johnson (1977) proposed that the method of manufacture was mostly lump molding with a paddle and anvil. No coil breaks were observed. The paste was well-worked and the grit was evenly distributed in all the sherds. A cord-wrapped paddle was used to finish the vessel. In this assemblage, z-twist cord impressions were identified, other specimens could not be

determined because of smoothing. On other rim sherds, cord roughening was vertical on the exterior and horizontal on the interior surface. One sherd was smoothed on both surfaces with slight ridges remaining on the exterior, suggesting previous treatment with a cord marked paddle.

The lip of this vessel was flattened and was the same thickness as the rim. The rim sherd was too small to predict orifice diameter; however, the profile was described as being straight or very slightly out flaring. No sherds with sharp angles were present indicating a fairly straight-sided vessel. In terms of decoration, the lip surfaces were diagonally cord-wrapped tool impressed. Smoothing was also described. The rim sherds have one row of bosses 35 mm apart and 25 mm below the lip. The bosses encircle the vessel and are 4 mm in diameter. One sherd had a hole drilled through it.

The *Wahkpa Chu' gn* site (24HL101) bordered the southern edge of the Milk River Valley west of Havre, Montana (Davis and Stallcop 1966:5). The site name is derived from an Assiniboine term meaning "little river or "small river". The cultural explanation and description of the occupation is extraordinarily complicated. Part of the site is a bison jump as well as a pounding area and includes processing and camping areas. Features and artifact associations were recovered from five discrete sub-levels. The excavation revealed three distinct occupation levels.

Diagnostic projectile points recovered from the site verify a Besant association. The site also produced sherds that represented three vessels. Vessel one was recovered in the sod layer and varied in thickness from 4 to 5 mm in thickness. The exterior was cord-

roughened with a smooth interior. No rim sherds were recovered for this vessel, but a gentle shoulder was indicated. Temper consisted of medium, uncrushed sand particles with minute pebble inclusions assumed to come from a local clay source. The second vessel was represented by only two small body sherds with brushed and partially smoothed exteriors. The thickness varied from 8.2 to 5 mm and the tempering was similar to vessel one. The third vessel was also represented by two small sherds; they were smoothed on both surfaces. Temper consisted of angular and crushed rock fragments as well as naturally occurring sand. The thickness of the two sherds was 8.5 mm.

The Butler-Rissler Site (48NA1000) is another manifestation of Besant with pottery. The site is located on a meander of the North Platte River about 33 km southwest of Casper, Wyoming. Test excavations exposed a single component which contained fire-cracked rock, fragments of mussel shell, burned and unburned bone fragments of non-bison, stone tools, debitage and cord-roughened ceramics (Miller et al. 1987:420).

Approximately 90 ceramic sherds were recovered, representing a single vessel. The paste included sub-angular sand and the temper was primarily of crushed granite which was evenly distributed in all the sherds. Colour variations of the sherds were believed to be the result of differential exposure to heat or varying degrees of weathering. The pottery was manufactured by the paddle and anvil method; no coil junctions were noted. Z-twisted cordage was noted as being used on the exterior of the vessel during construction. The cords were spaced at four strands per centimetre,

and their impressions were vertical and slightly diagonal on the vessel surface. Smoothing on some body sherds partially obliterated earlier surface treatment. Less than 25 percent of the vessel was reconstructed and at three cm below the rim, an exterior row of punctates circles the vessel neck. The vessel shape, surface treatment, and punctates are similar to Woodland attributes identified elsewhere in Besant sites (Miller et al. 1987:420).

### **6.5 Some Additional U.S. Sonota-Besant Pottery-Bearing Sites to Consider**

The cultural affiliations of the very few, first to be recognized, Woodland sites were not determined due to the failure to recover diagnostic projectile points from the site. According to Greiser (1994:34), assignment to a particular cultural unit was based on projectile point types and if these artifacts were not present there was hesitation to ascribe a cultural affiliation. The following sites are of this type; however, the information contained within the pottery samples collected was useful in further identifying the Woodland period on the plains.

Two pottery bearing localities were identified in the Souris Basin in North Dakota. Wood (1952) described these Woodland occupations as more intensive and extensive than might be suspected from the literature of the time. The Buffalo Lodge Lake site is located about 64 km north of the town of Minot. The sample recovered contained 29 rims sherds from at least 12 vessels, and 99 body sherds. The paste was coarse with angular particles of sand. The lips were smooth and the rims were either cord-roughened or

smooth. Wood (1952) considered the method of manufacturing to be mass-modelling.

All body sherds were described as having cord-roughened exteriors and irregular smoothed interiors. It has been suggested that the surface roughening was produced by a paddle wrapped with "Z" twist cords 1 to 2 mm thick. Impressions were noted as being parallel on most sherds with some showing random application. In decoration, one vessel was impressed with a cylindrical tool of small diameter applied obliquely to the exterior lip corner at a 45 degree angle. A fine cord-impressed zigzag line was identified on another rim sherd. Rim form was straight with rounded lips, some of which extruded over the rim as a result of shaping. The thickness was reported to range from 4 to 9 mm (Wood 1952).

The second site was located near the Souris River approximately 35 km north of Towner, North Dakota. According to Wood (1952; 235) a majority of the sherds are considered cord-roughened with a few plain sherds. They were much similar to the pottery from the Buffalo Lodge Lake site. Other sites with a Woodland affiliation are the Beeber (32LM235), Martain (32LM239), the Jamestown Mounds (32SN22), and an adjacent habitation site (32SN207) (Gregg 1987a:142). Additional Sonota pottery bearing sites mentioned are the Wounded Knee site (32EM21) and Site 32SN207 (Gregg 1987a:148).

A.M. Johnson (1988:141) describes a sherd from the Mud Creek site (24PH405) in northern Montana as Avonlea Net Impressed, but the sherd described had cord-roughened surface treatment and is typical of Plains Woodland (Besant) pottery. Johnson (1988)

suggested that the pottery sherd was most likely from a Besant component. Other sites to consider are the Rygh Site and the Midipadi Butte site (Johnson 1988). Unfortunately the reports of these two sites could not be obtained, but they, too, are considered to be Middle Plains Woodland Sonota-Besant pottery-bearing sites. In addition, a nearly complete Woodland vessel was recovered near Wheatland, Wyoming in good cultural context and dated to approximately 1750 B.P. (Frison 1978:57).

## **6.6 Summary and Discussion**

Most of the pottery associated with Middle Plains Woodland Sonota-Besant assemblages is found to have similar attributes. Neuman's Sonota pottery has been compared to a number of other U.S. sites. Most pottery samples are either cord-roughened or smoothed cord-roughened. Plain exteriors have also been found to be a common characteristic. Cordage has been identified as either being an "s" or "z" twist. Vessels are generally conoidal in shape. Vessel lips are generally rounded, some appear to have overhanging lips on the exterior. Punctates and dentate impressions have been identified on some vessels. The samples were similar in paste, surface treatment, decoration and form, generally with fine paste and coarse grit.

Pottery in the Missouri River Valley, in the Souris Basin, and in intervening ravines revealed a broad geographic distribution. The near identity of the pottery in a large area is suggested to indicate a relatively intense occupation by a number of closely related Woodland groups (Wood 1952:235). According to the reports, the

pottery is thought to have derived from eastern Woodland influences.



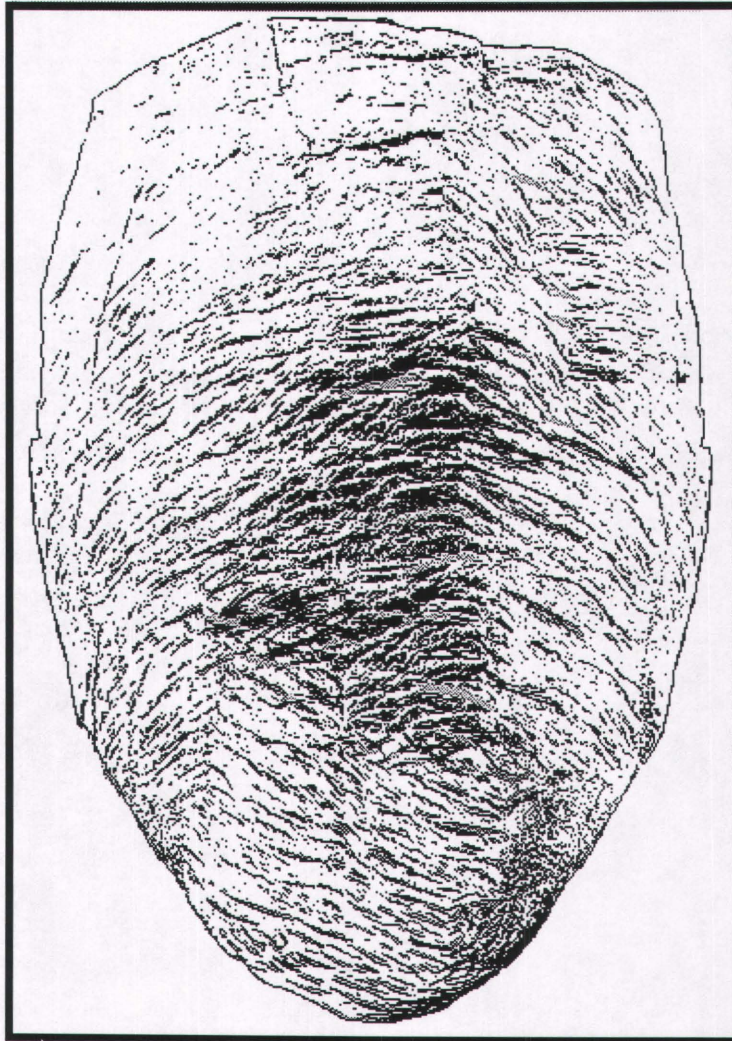
## **7.0 Summary and Conclusion**

### **7.1 Introduction**

Our knowledge of Besant-Sonota pottery on the Canadian Plains is based on three Systematiccally-excavated components in Manitoba, four in Saskatchewan and one in Alberta. There are also a number of pottery-bearing, multi-component sites that hold some possibilities in each province. As well, materials from several test excavations and collections exhibit similarities to Besant-Sonota pottery. Their relationships are presented in the most gross terms. Assessment of the potsherds recovered from these sites has demonstrated similar characteristics as well as some vessel variations within the samples. The Canadian grasslands Besant-Sonota pottery bear a similarity to that described by Neuman (1975), and there is a larger proportion of Besant-Sonota pottery-bearing sites found south of the 49th parallel. These wares also shared similar characteristics with the pottery of contemporaneous archaeological cultures in the region. The pottery from a number of related archaeological cultures will be discussed in this chapter for comparison. An overall assessment of Besant-Sonota pottey will also be included.

### **7.2 Coeval Complexes and Wares**

Many archaeological sites on the northern Great Plains have produced Woodland wares that appear to be related. Several eastern Woodland wares clearly represent a link to Early and Middle Woodland traditions in the west. Figure 7.1 is a modified illustration of a typical Middle Plains Woodland vessel.



**Figure 7.1:** Early Middle Woodland pottery found in Eastern Wyoming (modified from Frison 1978:68)

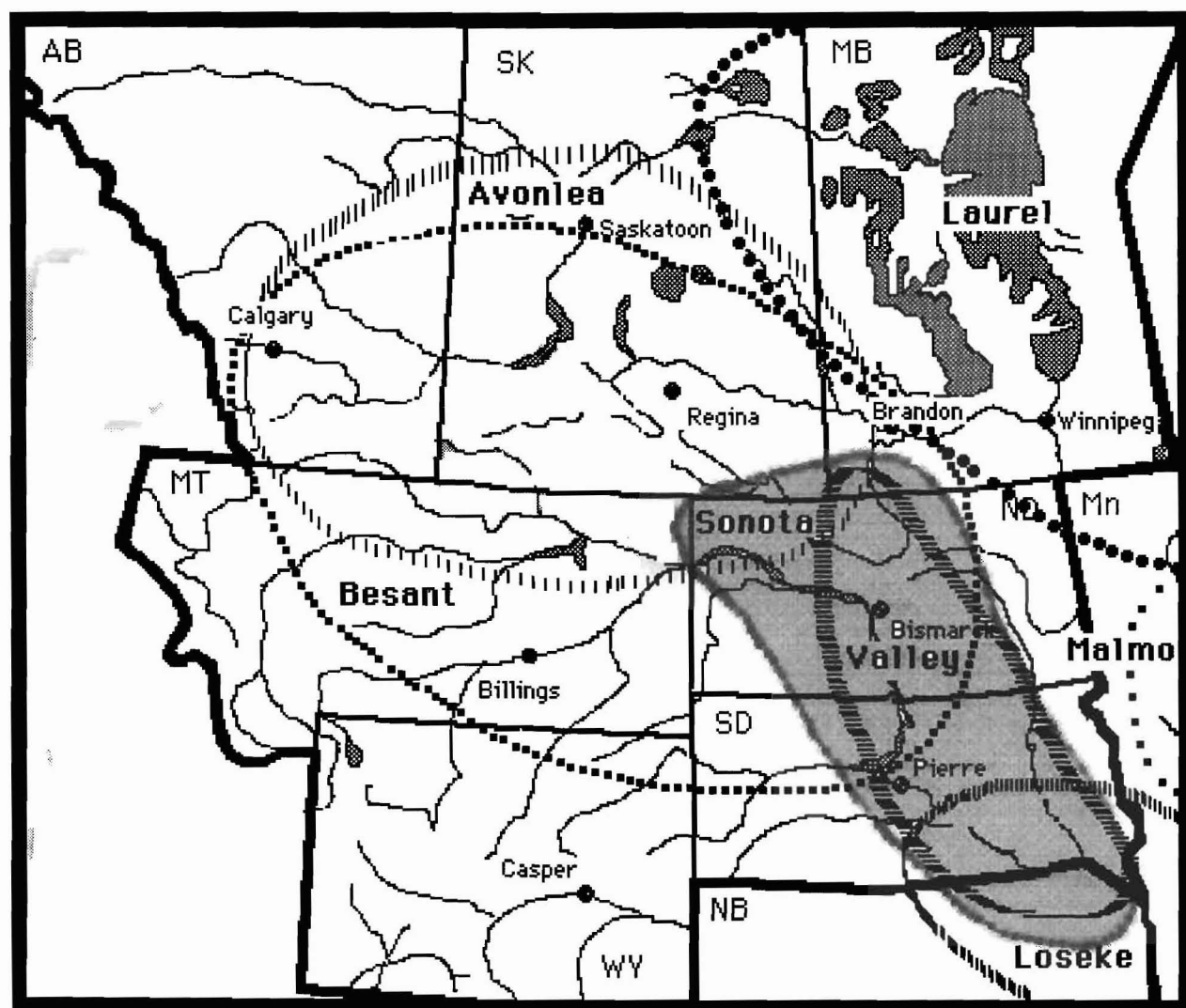
Ceramic vessels from these traditions generally have cord-marked exteriors and shoulderless profiles (Neuman 1975:82). The pottery wares all have fairly thick walls manufactured from a single lump of clay or coils of clay to which pieces of crushed rock were added. The pots were shaped by slapping the exterior surfaces with a paddle wrapped with cordage as an anvil was held on the interior surface. These wares are not confined to the Northern Plains of the United States; they have also turned up in a number of sites on the Canadian grasslands and parklands.

The Middle Woodland period reflected a period of close interrelationships among groups who shared similar cultural traits. Besant-Sonota pottery will be compared with pottery of coeval Middle Woodland archaeological cultures of this part of North America. Figure 7.2 illustrates some of the coeval archaeological cultures and wares on the Northwestern Plains. The cultures which are involved are *Valley*, which, along with *Keith*, *Ash Hollow* and *Sonota* have been assigned to the Orleans Composite by Syms (1977:87). *Avonlea*, *Laurel Phase* and some Hopewellian sub-complex pottery also have similarities with Besant-Sonota wares. Similarities in ceramics have also been identified in the *Loseke Composite* and the *Malmo Focus*. These archaeological cultures will be discussed in terms of their association or relationship with Besant-Sonota.

### **7.2.1 Orleans Composite**

Syms (1977:87) lumped *Sonota* with *Valley*, *Keith*, and *Ash Hollow* under the Orleans composite. The attributes of *Sonota* and

*Valley* pottery, as noted by Gregg and Picha (1989:62), are similar to *Rowe ware* from southern Iowa and *Scalp Ware* from along the Missouri River in South Dakota. *Valley* ware was first discussed by Hill and Kivitt in 1940. This complex was known by its burial mounds.



**Figure 7.2:** Distribution of Middle Woodland groups on the Northern Plains. (Information from Syms 1977:80; Meyer and Hamilton 1994:102; Walde et al. 1995:17)

The *Valley* complex contains a ware known as *Valley Cord-Roughened*. Vessels of this ware are truncated ovoid jars with wide mouths and conoidal bases with grit-tempered paste. Cord-roughened impressions run vertically, diagonally, criss cross or spirally on the exteriors (Kivett 1949, 1952; Neuman 1975:83; Syms 1977:88). Some were decorated with punctates or bosses, cord-wrapped rod impressions, or a combination of the latter with pinch marks or bosses including a little incising or trailing on the rim exteriors. Neuman (1975:86) stated that the Stelzer site pottery showed similar traits to *Valley*. This also included similar lithic and bone tools. In fact, Reeves (1983:166) considered *Besant* as an extension of the *Valley phase* because both were associated spatially and temporally. Reeves (1983) stated that *Besant* points were present in *Valley* sites; however, the *Valley* culture was recognized as being produced by semisedentary peoples, unlike *Besant*. Some ceramic motifs (cord-wrapped rod and punctated lips) were noted by Neuman (1975) as absent in *Besant*.

Syms (1977:89) contrasted *Sonota* and *Valley* complexes in southwestern Manitoba and concluded that vessel form and surfaces were different along with certain other cultural aspects in lithic technology and resource exploitation. The distribution for *Valley Cord-Roughened* began at the border of Kansas, north through Nebraska following the Missouri River Valley through North Dakota and as far west as Havre, Montana (Neuman 1975:83). No *Sonota* or *Valley* wares were found in Minnesota (Syms 1977:88). *Valley* was found to be contemporaneous with the Kansas City Hopewell (Syms 1977:88).



Apparent Hopewell affinities were initially identified with *Valley* cord-roughened sherds (Kivitt 1949:68). Reeves (1983:146) evaluated the Besant-Sonota-Valley relationships and concluded that even though there were some cultural similarities, the ceramics resulted from contact with similar Middle Woodland communities to the east. Tiffany (1978:173) also pointed out that the *Valley* complex was non-Hopewellian.

*Keith* wares are found in northern and central Nebraska. They are defined as *Harlan Cord-Roughened* pottery. Vessels were globular with flat, straight rims and tempered with crushed calcite. Ossuaries associated with this archaeological culture also contained hundreds of flat shell beads. Bozel and Windfrey (1994:133) state that *Keith* pottery (*Harlan Cord-Roughened*) almost always lacks decoration. Vessel rims are undecorated or exhibit bosses or punctates, incised lines, dentate stamping, cord-wrapped rod impressions, and lip notching.

*Ash Hollow Cord-Roughened* and *Harlan Cord-Roughened* wares from Woodland sites in Nebraska were also identified as comparable to sherds from Sonota sites such as Indian Hill (32MZ2) (Neuman 1975:81). Syms (1977:89) noted differences between the impressions on Sonota vessels and those on *Valley* and *Harlan Cord-Roughened* types, but stated there were no studies to determine the nature of the differences. *Ash Hollow* occupied part of the *Parker* phase area (Reeves 1983:182). In addition, *Ash Hollow* wares were also sourced to *Upper Republican* wares found further to the east.

### **7.2.2 Loseke**

The *Loseke Composite* pottery is characterized by cord-roughened surfaces and cord-impressed decoration on the lip in horizontal rows or occasionally in alternating triangles or oblique lines over horizontal rows (Syms 1977:91). The *Loseke Composite* is known from a number of sites in Nebraska and western Iowa and southern South Dakota. It is also related to the *Sterns Creek Complex* and *Faye Cord Impressed*, *Faye Cord Roughened*, *Ellis Cord Impressed* and *Scalp Cord Impressed* potteries. Their temporal span was stated to overlap the Orleans Composite (Syms 1977:91). It was stated to have derived from the *Valley* phase (Hannus 1994:193).

### **7.2.3 Malmo**

The Malmo Focus assemblage in central Minnesota was suggested to have some likeness to Besant-Sonota (Neuman 1975:87, Reeves 1983:154). Few similarities were found to be indicative of a common source of diffusion and participation in the Middle Woodland ceramic tradition. The wares were described as plain surfaced conoidal vessels with decorative bosses and punctates and a minority of cord-marked body sherds (Neuman 1975, Anfinson 1979). Reeves (1983:155) did not think these similarities were sufficient to indicate related cultures which should be conceptualized as spatially adjacent populations who maintained contact.

Cultural elements other than ceramics were also found to be related to other Middle Woodland cultures. Syms (1977:82) stated that the Malmo phase was recognized as an intermediary between Laurel and Hopewell. According to Anfinson (1979:137), Malmo



pottery was similar to *Havana* ware which is present in Hopewell sites.

#### **7.2.4 Avonlea**

The origins and distinctiveness of Avonlea and Besant has archaeologists puzzled. The diagnostic artifacts separating Avonlea from Besant are projectile points and ceramic styles (Syms 1977:83). Hannus (1996:186) stated that evidence of Avonlea in Besant components and Besant types in Avonlea components indicates that Besant and Avonlea were coeval. However, Walde et.al. (1995) argued that Besant and Avonlea were not coeval. They stated the following:

A very comprehensive review and interpretation of Late Pre-contact dates has been published by Morlan (1988). These suggest a broad time span during which late Besant and early Avonlea overlapped on the Canadian plains and in the northwestern plains states (Morlan 1988:306). We suggest that radiocarbon dates incorporate a great deal of noise: some samples are not associated with what they appear to be associated, some are incorrectly dated by the lab, some are contaminated, laboratory techniques have changed over time, etc. Radiocarbon dates, therefore, can be employed as a very general indicator of time. Unfortunately, archaeologists have become so focused on the result of absolute dating techniques that the traditional relative dating approach such as stratigraphy are often ignored or not considered (Walde, Meyer and Unfreed; 1995:54).

Avonlea components always occurred in strata above Besant and consideration of the radiocarbon data also suggests that in the study area these are largely sequential rather than contemporaneous cultures.

It is generally understood that Besant was the first culture on the Canadian Plains with pottery and Avonlea the first with the bow and arrow, and both were ultimately recognized as possessing the two technologies (Greiser 1994). Morlan (1988:307) stated that Avonlea represented a displacement and movement of a population from the upper Mississippi Valley into the Northern Plains some time during A.D. 150 to 200 and displaced Besant geographically in many areas of the Northern plain by about A.D. 600.

Avonlea is recognized by distinctive and delicate side-notched projectile points (Davis and Stallcopp 1966; Kehoe and Kehoe 1968; T.F.. Kehoe 1973; Reeves 1970a; 1970b; Syms 1977). Avonlea point varieties originated in the upper Saskatchewan basin and spread out across the Northern Plains (Reeves 1970, 1983). Syms (1977:930) pointed out that a very small percentage appeared in Sonota sites in Manitoba.

It has been suggested by Vickers (1994:15) that Avonlea persisted until roughly A.D. 1150 in Alberta and Saskatchewan. Avonlea is mainly found on the plains west of the Middle Missouri north of the Platte drainage, north of the Bighorn-Shoshone Basin, east of the main Rocky Mountains, south of the Boreal Forest in Alberta-Saskatchewan, and the western parklands in Manitoba (Reeves 1983:101, Syms 1977:93). It was hypothetically seen as being prevented from expanding eastward by Besant (Greiser 1996:61). However, Morlan (1988) stated that it expanded out of the east, the upper Missouri area.

Meyer and Hamilton (1994:108) noted that a number of Avonlea components have been identified on the edge of the boreal

forest in central Saskatchewan. In Manitoba, they are absent from boreal forest sites and rare in parkland and grasslands sites.

According to Meyer and Hamilton (1996:111), Avonlea components are not found deep within the forest and similarly, Laurel vessels are rare beyond the forest edge in both Manitoba and Saskatchewan.

There is the occasional co-occurrence of Avonlea and Laurel pottery in forest edge sites, but Besant pottery was stated not to be found in such contexts.

Meyer and Hamilton (1994:111) state that occasional Besant sherds might be expected to be present in Laurel components in the southern edge of the forest of west-central Manitoba where there is a strong presence of Besant in the parkland . Meyer and Hamilton (1996) state that avoidance and co-occurrence provide suggestive evidence that the cultural material recognized as Avonlea, Laurel and Besant relate to three distinct cultural groups characterized by ethnic boundaries across which there was little interaction.

Avonlea pottery is relatively common and includes a number of forms which are primarily conoidal with a large range of sizes (Byrne 1973). It is known to be present in many surface collections in the parkland and northern grasslands and in situ components. Saskatchewan has produced a substantial quantity of pottery which has been described as being generally net-impressed on the exterior with some fabric-impressed and smooth-surfaces represented (Meyer and Hamilton 1994:109). In addition, decoration is described as being very simple with one or more rows of punctates below the rim. Parallel grooved pottery has also been identified by Johnson

(1988) and Walde et al. (1995). Johnson (1988:140) considered Besant as one possible source for parallel grooved pottery.

Walde et al. (1995:23) state that it is becoming increasingly clear that regional distinctions in Avonlea are very strong with characteristic regional pottery styles supplementing differences in lithic raw materials exchange networks. This is reflected in parallel grooved and net impressed ceramic styles which suggest different origins, influences and interaction, and indirectly, differences between people using the projectile points. They point out that the complexity of cultural relationships in both spatial and temporal terms is comparable to that present during Plains Side-notch times and that these points have been de facto treated as a horizon marker which overlap a number of regional phases. Walde et al. (1995:23) conclude by stating that continuing research and reassessment may call for a similar approach to Avonlea components. The same consideration should also be given to Besant-Sonota.

#### **7.2.5 Laurel**

The Sonota complex was briefly compared to Laurel by Neuman (1975:87). Laurel ware was first recognized by Wilford (1943; 1955) from Middle Woodland burial mounds on the Minnesota side of the Rainy River. The estimated temporal span for Laurel is from 100 B.C. to A.D. 1100 with most dates falling within the A.D. 200 to 800 range (Syms 1977:132). However, Reid and Rajnovich (1991:193) give dates that range from 200 B.C. to A.D. 1200. The geographic distribution extends in a broad band from northern Minnesota, across northwestern Ontario, southeastern and

north central Manitoba and northeastern Saskatchewan (Wright 1967:133; Syms 1977:81; Meyer and Hamilton 1994:103).

Several Laurel pottery types have been identified, including Dentate, Pseudo-Scallop shell, Bossed, Incised, Plain, Punctate, Cord-wrapped stick, Dragged Oblique, and Undragged Oblique (Reid and Rajnovich 1991:206-216). The hallmark of Laurel is dentate stamped rim decoration over a smooth exterior rim (Schneider 1982, Stoltman 1973:74). As stated earlier, Besant-Sonota may share some common ceramic traits with Laurel as demonstrated by the presence of dentate stamp and of bossed decoration in both. Both also utilized beaver incisor tools (Gregg 1985 :119).

It is noted that in southern Manitoba and Minnesota, people making Laurel pottery did occupy the grasslands and parklands which indicates the ability to adapt to a new environment and that it therefore seemed that sociopolitical relations were the major factor in restricting Laurel occupation of the parklands of southwestern Manitoba and Saskatchewan (Meyer and Hamilton 1994:112). Gregg and Picha (1989:43) state that Laurel pottery was known to occur along the upper James River region in North Dakota. Avonlea in Saskatchewan and Besant in Manitoba were seen as restricting the westward movement of Laurel (Meyer and Hamilton 1994:112).

Sites in the parklands of Manitoba have produced some potsherds that bear a close similarity to that of Besant-Sonota as well as that of the coeval Laurel tradition. Some plain, undecorated sherds may very well be Laurel Plain ware, but they also fit into the Besant-Sonota criteria except that they are coiled.

In one example, the *Wapiti Sakihtaw* site produced smooth sherds with incised tool impressions that are quite similar to Laurel Oblique, subtype undragged stamped rims (Anfinson 1979:130). Stoltman (1973) also illustrates similar wares. Some sherds from the *Wapiti Sakihtaw* site indicate coil breakage. Coil breaks have never been identified in Besant-Sonota ceramics; however, Laurel phase ceramics, which are known to be contemporaneous to Besant-Sonota, were manufactured by coiling (Gregg 1985b:119).

It has been found that the Besant-Sonota pottery shares some common traits with the Laurel tradition as demonstrated in dentate stamp and punctate ceramic decoration, especially bosses. Some sherds from *Pinew Waci* and *Wapiti Sakihtaw* look remarkably like Laurel sherds. There are indications of a closer link between the two cultural phases, primarily in the Manitoba Parkland.

*Pinew Watci* and *Wapiti Sakihtaw* pottery certainly reflect characteristics of Sonota-Besant and Laurel. However, it was stated that Besant pottery might be expected in Laurel components in the southern edge of the forest of west-central Manitoba where there is a strong presence of Besant in the parkland (Meyer and Hamilton 1994:111).

However, the *Pinew Watci* and *Wapiti Sakihtaw* sites, reflect the possibility of Besant-Sonota and Laurel interaction in the Manitoba parklands. Other Besant-Sonota sites have demonstrated interaction with Avonlea, as evidenced by the lithic assemblages. The Aspen Parkland is thought to have been utilized by boreal forest groups on a seasonal round during summer and fall (Nicholson 1988, Syms 1977). It been generally considered that in precontact times,

bison wintered in the aspen Parkland (Morgan 1980:157-158). It has been proposed that plains bison hunters would follow the herds into the parkland during the winter months and then follow the bison back onto the Plains the following spring (Morgan 1980, Nicholson 1988, Syms 1977). Malainey et al. (1996:333) dispute the notion of the seasonal movement of bison from the plains to the parklands. However, boundaries of these two groups overlapped and it is possible that contact and trade occurred while on their seasonal rounds, perhaps in early spring and late fall. Both cultures would have been exploiting two diverse environments.

#### **7.2.6 Hopewell**

The Sonota Complex also overlapped temporally with Hopewellian developments which involved continental trade networks (Syms 1977:90). The term "Hopewellian interaction sphere" was coined to describe the distribution of styles of artifacts used in the subsistence technology of Middle Woodland traditions. The Hopewellian materials are restricted to a few major river valleys and there are four traditions represented in the exchange system in which Hopewellian diagnostics circulated (Struever 1965:218). However, some neighboring Middle Woodland groups did not participate in this exchange system.

O'Brien (1994:203) described early Kansas City Hopewell pottery as decorated with cord-wrapped stick impressions on top of the rim. Below the impressions a horizontal line of embossing is present. In addition, vessels have smoothed surfaces, but near the rims, incised cross hatching and vertical or horizontal rocker



stamping occurred. Punctates below the hatching of an s rim was also identified. The body of the vessel also had either plain or rows of rocker stamped sets in zones defined by incised lines.

Neuman (1975:85) proposed the possibility of matching Sonota wares to Hopewell primarily on the basis of the vessel shape, surface treatment, and decorative motifs, wall thickness, vessel size, lip shape, color, and paste texture. This again was based on his Stelzer wares. Neuman (1975:86) stated that the Renner site in northwestern Missouri contained diagnostic Hopewell wares. At the Leahy site in Southern Nebraska, similar pottery was reported to be associated with a minority of Hopewell type sherds (Neuman 1975:86). He allied the pottery with *Valley Cord-roughened*, *Scalp Punctate* and pottery from the Stelzer collection. The sherds represent grit tempered conoidal vessels with corded exteriors, smooth interiors and decoration consisting of a horizontal line of punctates below the lip (Wedel 1953).

Syms (1977:84) stated the following to support the idea of Hopewell influence on the Northern Plains:

According to Wilmeth (1972:9), the earliest ceramics on the Plains indicate a diffusion to the Central Plains during Griffin's (1958:11) Middle Hopewell Period, which is equivalent to Struever's (1964:93) Hopewellian Phase of the Havana Tradition, and probably the Bedford and Ogden phases of the Middle Woodland (Griffin et al. 1970:1-9).

Neuman (1975) stated that a Stelzer rim sherd representing one vessel resembled *Havana ware* from the Illinois Valley. However, *Havana* decorative influences in Sonota pottery were found to be unknown (Gregg and Picha 1989:63). *Havana Plain pottery*

type (Griffin 1952:106) was assigned to the Hopewell tradition. In addition, Stuever (1965:120) identified four *Havana* micro style zones in Illinois, further subdividing the ware.

Arpan mound pottery (Neuman 1975) was similar to *Irving Plain* also from Illinois Valley Hopewell sites. Sherds were also reported to resemble certain *Weaver Ware* ceramics, also from the Illinois Valley. Sherds from the Naze site were reported as similar to *Black Sand* pottery also associated with Hopewell (Gregg 1987, Gregg and Picha 1989:39). Neuman (1975:96) concluded that the burial mounds along with associated artifacts and ceramics reflected derivations that were transmitted westward by Hopewellian societies through direct or indirect diffusion through the exchange of resources. People with Sonota material culture were participants in the intersocial network of exchange (Gregg and Picha 1989:43).

Syms (1977:77) describes the Hopewellian sites as clustered along major streams from Florida to Minnesota. There were two major centres of Hopewellian development in Illinois and Ohio (Struever and Houart 1972) which are relevant to the understanding of Middle Woodland developments on the Northeastern Plains and adjacent Boreal Forest. The two centers underwent different developments, with the Illinois Hopewell overlapping with Adena and beginning somewhat earlier than the Ohio developments. Both were seen as having expansionist tendencies where the Illinois influences extended into eastern Canada, Minnesota, Iowa, Michigan and Wisconsin and the Ohio influences were found to extend to Pennsylvania and New York (Jennings 1974:229-230)

Reeves (1983a:191) suggested that Besant had ties with the Hopewellian cultures of Illinois. In his hypothesis, Besant was seen as adopting the burial mound practice while another result of the interaction caused Besant to move from an egalitarian to a ranked society. Reeves (1973) hypothesized that the Hopewellian Interaction sphere accounted for the Besant expansion. He stated that the western expansion onto the Missouri and into the upper Missouri and the Saskatchewan basin resulted from participation in the Hopewellian Interaction Sphere. He suggested that Besant had important ties with Hopewell through the exchange or trade of Knife River flint, obsidian, grizzly bear teeth and perishables like bison hides and meat (Reeves 1983a:191). In this process, Besant received copper, antler pins, shell ornaments, pottery and perishables such as corn and other produce.

Syms' (1977:67) concept of the Hopewellian Interaction Sphere describes a situation in which a number of autonomous centers shared a set of social status items and exotic raw materials. In addition, large Hopewellian sites may have served as regional transaction centres, distinct from other Hopewellian sites in terms of size, complexity of earthen constructions and quality and diversity of social status items. Great quantities of obsidian and grizzly bear teeth are found in Ohio and Illinois suggesting a link through to the foothills of the Rocky Mountains.

According to Syms (1977:79) the organizational controls required to build the mounds and large earthworks were provided by the extensive trade networks and the social status of an elite group expressed in preferential burial accompanied by vast

quantities of non-local raw materials and elaborate social status items. This supports the idea of an elaborate social organization. Hopewellians were seen as sedentary peoples with a chiefdom level of social organization (Sanders and Marino 1970:96-98).

The Sonota mound sites studied in the Missouri River drainage system in the eastern Dakotas contained numerous exotic goods and ceramics which Neuman (1975) felt reflected influence from Hopewellian groups to the east and southeast of the Plains area. He suggested that the influence occurred as the Hopewell people traded with the Besant people for highly valued commodities such as obsidian and Knife River flint (Neuman 1975:96). However, Vickers (1974:14) points out that a trade surplus model remains ambiguous because there is little evidence of strong Besant-Hopewell trade interactions. To prove this, he points out that there is a lack of Knife River Flint in Hopewell sites and obsidian is rare with both groups. He further states that there may have been strong communication eastward into the woodlands; however, it remains uncertain if Besant social organization was effected.

### **7.3. Summary of Besant-Sonota Wares**

Technologically, Besant-Sonota is seen as characterized by one general class of pottery Neuman (1975:93). Paste includes crushed rock and sand temper. Vessels were molded into shape with a paddle and anvil. According to Neuman (1975) and Gregg (1987a), no coiling was ever identified. All vessels were found to be conoidal in shape. Two gross classes have emerged in Neuman's (1975) sample. These classes were identified in this assessment.

One class of Besant-Sonota pottery is characterized by having exterior cord-roughening usually smoothed. The exterior surface of vessels is usually cord marked up to or including the lip and oriented vertically, diagonally, or horizontally. Cord impressions on a sample of sherds from a number of sites suggested that the cord consisted of more than one tightly woven yarn with a counter clockwise z-twist which was irregularly wound, varying the cord impressions (Wood and Johnson 1983:55). In another case, the cord impressions were identified as two strands wound clockwise (s-twist).

A second class consists of plain-surface vessels, some of which show a luster while others do not (Neuman 1975:93). Most of the sites in the assessment produced some smooth sherds as part of the assemblage.

The most popular decorative motif was punctates which were evenly spaced in a single row encircling the vessel rim (Neuman 1975). Some had both internal and exterior punctates. Plain vessels had alternately spaced internal and external punctates. Sherds were also described with exterior bosses while some vessels had no punctates. On one vessel from the Stelzer site, there was a row of arched dentate stamps which were positioned below an exterior row of punctates (Neuman 1975). These decorative motifs were only evident on the Walter Felt sherds in the Canadian assemblages. The Besant-Sonota wares identified on the Canadian Plains are listed in Table 7.1. Besant-Sonota shared ceramic characteristics are smoothed or cord-roughened sherds.

Rim sherds have been rare in most of the sites assessed, however, a few have been recovered. The lip forms may be rounded

and beveled to the exterior, flat, or flat and sloping to the exterior or with an overlap to the exterior surface. Other Attributes on the lip include cord-wrapped object impressions and transverse or oblique tool impressions. Some rims have been identified with fingernail impressions and deep vertical impressions made with a tool.

**Table 7.1:** Vessels recovered from systematically/excavated Besant-Sonota components sites on the Canadian Plains.

Site/ Vessel	Lip Form	Rim Decoration	Exterior Finish	Orientation of Cord- roughening
<b>Pinew Watci</b>				
Vessel-1			Smooth	
Vessel-2			Cord-roughened	
<b>Wapiti Sakihtahaw</b>				
Vessel-1	Beveled inward	Incised	Smooth	
Vessel-2	Folded/Braced		Cord-roughened	Vertical
Vessel-3	Folded/Braced		Cord-roughened	Vertical
Vessel-4			Smooth	
<b>Nahastewin</b>				
Vessel-1	Rounded		Cord roughened	Horizontal
Vessel-2			Cord-roughened	Vertical
Vessel-4			Cord-roughened	Unknown
Vessel-5			Cord-roughened, Smoothed over	
<b>Walter Felt</b>				
Vessel-1	Rolled in /Flat		Cord-roughened	Horizontal
Vessel-2		Bossed	Cord-roughened	Horizontal
<b>Garratt</b>				
Vessel-1	Rounded		Cord-roughened	Horizontal
Vessel-2			Smooth	
<b>Crane</b>				
Vessel-1			Cord-roughened, Smoothed over	
Undetermined				
<b>Bennett</b>				
Vessel-1	Beveled out		Cord-roughened	Horizontal
Undetermined			Cord-roughened	
<b>Ross Glen</b>				
Undetermined			Cord-roughened	Smoothed over

Clay overhangs on the rims have also been identified in some specimens. Neuman (1975:82), however, noted that the interior and exterior overhang on the lip of the Walter Felt vessels was not present in his Missouri River assemblages. As well, the sherd with the dentates also appeared to be unusual for Besant-Sonota. This example of both rim and body sherds do not appear in other Besant-Sonota sites on the Northern Plains. Smooth or plain sherds with incising have been identified in the western Manitoba parkland assemblages associated with Besant-Sonota. Similar sherds are also found in neighboring Laurel components.

#### **7.4 Origins of Besant-Sonota**

Besant-Sonota is known to have covered a wide geographical area for approximately 1200 years. Three decades ago, relatively little was known about the Woodland tradition itself when compared to the rest of the Northern Plains. When we look at the lithic tool assemblage, there are those who believe that Besant originated on the northern plains. The pottery traits, however, suggest a diffusion from the eastern Woodlands. Despite the research, no indisputable answers have yet emerged because of the relatively small pottery sample size when compared to the lithic samples that have been recovered.

Schlesier (1994:318) used an ethnographic approach based on linguistics to determine the development of Plains groups such as Besant. He proposed that the peoples who produced Besant were a



proto-Algonquian group who entered the Northern Plains from the Keewatin and Mackenzie districts two Plains Algonquian linguistic groups, an eastern and western one. The western group represented the prehistoric Blackfoot and the eastern group represented the prehistoric Cheyenne (Schlesier 1994; 318). He (1994:318) stated that his hypotheses was not challenged with contradicting data but was met with disapproval by other writers in the volume he edited, because of his use of ethnic entities.

### **7.5 Summary Statement**

The ratio of nonceramic Besant-Sonota kill and processing sites far exceeds the pottery-bearing sites of the culture on the Canadian Grasslands. In comparing the Northern Plains Besant-Sonota ceramics, several hypotheses can be drawn regarding the development of pottery on the Canadian Plains.

It has become clear that all the problems concerning Sonota Besant origins and artifact styles have not been fully resolved. That the initiation date for Besant in the Middle Missouri, the Upper Missouri area and Saskatchewan basin remains unresolved with more recent findings. Perhaps it is a culture that just evolved their or represents an actual physical movement of a population westward. The sites in the parklands of Manitoba indicate the possibility of a northeasterly movement into Laurel territory. Distributional claim according to Reeves's (1970a) was based on the Sonota Mound Complex in the Dakotas, Laurel sites in eastern Manitoba, and the southwestern Manitoba mounds, kill sites and surface collections. As Syms (1977) hypothesized, it is highly likely

that Sonota was extensively involved in the Hopewellian trade network as demonstrated in the artifact assemblages recovered. This trade network certainly demonstrated an influence on the distribution of ceramics wares onto the Northern Plains. Problems found within the distribution of lithic materials is still not fully answered.

In attempting to explain the development of clay pottery on the Canadian grasslands it is highly likely that trade was the major influential factor resulting in diffusion onto the northwestern Plains from the eastern woodlands. Although archaeological evidence to support this can not be verified fully by the material culture, the trade goods, apart from bison, could have included other perishable goods such as herbal medicines and horticultural produce. Herbal medicines are widely traded by contemporary First Nation peoples and it stands to reason that this same exchange method could have been practiced for thousands of years. This exchange system has been validated through oral tradition. Another commodity that needs to be further studied is the exchange and impact of wild rice apart from horticultural produce on the Northeastern Plains. As in many eastern woodland cases, wild rice has been linked with ceramic development and was possibly followed by small scale horticulture as well.

Intermarriage may also have resulted in the introduction of ceramics to the Northern Plains. As Nicholson (1987:39) stated, the answers may lie in the careful analysis of modal changes within the various classes of artifacts which will trace change through time and space to the point of origin. He further proposed that Besant-Sonota

complexes have their origin in a blending of cultures similar to that of Sharrock's (1974) Young Dog band of the Assiniboine Cree where intermarriage produced a hybrid ethnicity which was repudiated by both Cree and Assiniboine. It is safe to speculate that along with trade or warfare came the possibility of intermarriages.

There have been no clear breaks shown between the coeval wares and Sonota wares for they tend to show trends that extend out of the eastern woodlands. There has been some transfers of elements between Woodland and Plains groups. We must understand these complexes and their adaptations before we can be comfortable in interpreting the transformations that occurred on the Plains. Gregg and Picha (1989:43) stated that Plains Woodland peoples were not existing in isolation between the Great Plains and Eastern Woodlands as some may have thought in the past. Past cultures were never static and always changed as do the contemporary cultures of the Plains.

There is evidence that the wares of the Sonota Complex extended into southwestern Manitoba and southeastern Saskatchewan. It is my understanding that the Southern Canadian Plains was the northern periphery of the Sonota Complex. The characteristics of the wares examined in this assessment was found to be stylistically similar. Sonota is also believed to have greatly influenced later developments of ceramic wares on the Canadian Plains.

Sonota pottery has been difficult to classify since limited ceramic materials are obtained from most sites and therefore provides little basis for comparison or description from the Canadian

Plains. The limited examples have appeared to be homogeneous within each excavation. Many American sites produced a number of Middle Woodland wares which were named after the sites they were found in. When assessing the classification of these wares, typologies and the taxonomic systems have been restricted regionally. As well, its found to be confusing and diverse. The classification of many Middle Woodland wares including Besant-Sonota needs to be reworked in a more comprehensive manner. It is necessary to develop a larger data base showing how portions of the material culture other than projectile points and pottery differed. Until such alleged differences can be adequately documented it is useful to consider the people who produced Besant-Sonota wares as *nistam ka-ke askihkokechik puskawaw-askihk*, which when translated from the Cree language means, "The first potters of the Plains".

## References Cited

Anderson, D

1979a Laurel Ware. In *A Handbook of Minnesota Prehistoric Ceramics*, edited by S. F. Anfinson, pp. 121-135. Occasional Publications in Minnesota Anthropology 5. Minnesota Archaeological Society.

1979b Fox Lake Phase. In *A Handbook of Minnesota Prehistoric Ceramics.*, edited by S. F. Anfinson, pp. 79-86, Occasional Publications in Minnesota Anthropology 5. Minnesota Archaeological Society.

Arthurs, D.

1986 *Archaeological Investigation at the Long Sault Site (Manitou Mounds)*. Conservation Archaeological Report Northwestern Region, Report No.7, Ministry of Citizenship and Culture, Kenora.

Bird, R. D.

1930 Biotic Communities of the Aspen Parkland of Central Canada. *Ecology* 11(2):356-441.

Bozzhardt, R. F., J. L. Theler and T.F. Kehoe

1986 The Early Woodland Stage. *Wisconsin Archeologist* 67(34):243-262.

Bozell, J. R. and J. V. Winfrey

1994 A Review of Middle Woodland Archaeology in Nebraska. *Plains Anthropologist* 39(148):125-144.

Braun, D.

1983 Pots as Tools. In *Archaeological Hammers and Theories*, edited by A. Keene and J. Moore, pp. 107-134. Academic Press, New York.

Brumley, J., B.J. Dau, M. Green, L. Heikkla, M. Quigg, C. Rushworth and S. Saylor

1981 Archaeological Salvage Investigation Conducted in 1979 and 1980, Cypress Hills Provincial Park. Report on File, Archaeological Survey of Alberta, Edmonton.

Brumley, J. and B. Dau

- 1988 *Historical Resource Investigations within the Forty Mile Coulee Reservoir*. Manuscript Series No. 13. Archaeological Survey of Alberta, Edmonton.

Brumley, J. H. and P. J. Rennie

- 1995 A Culture History Model for the Plains Of North America and Surrounding Regions. Manuscript on file, (Draft) Ethos Consulting Inc., Havre, Montana.

Buchner, A. P.

- 1980 *Cultural Responses to Altithermal (Atlantic ) Climates Along the Eastern Margins of North American Grasslands 5500-3000 B.C.* Mercury Series Paper No. 97. National Museum of Man, Archaeological Survey of Canada, Ottawa.

Butler, W. B. and J. J. Hoffman

- 1992 A Checklist of Plains Ceramics Wares and Types: *South Dakota Archaeology* 16.

Byrne, W.

- 1973 *The Archaeology and Prehistory of Southern Alberta as Reflected by Ceramics*. Mercury Series Paper No. 4. National Museum of Man, Archaeological Survey of Canada, Ottawa.

Calabrese, F. A.

- 1972 Cross Ranch; A Study of Variability in a Stable Cultural Tradition. *Plains Anthropologist*, Memoir 9.

- 1977 Ceramic Classification in Middle Missouri Prehistory. *Plains Anthropologist* 22(78):28-36.

Coupland, R. T.

- 1961 A Reconstruction of Grassland Classification in the Northern Great Plains of North America. *Journal of Ecology* 49:135-167.

Coupland, R. T. and J. S. Rowe

- 1969 Natural Vegetation of Saskatchewan. In *Atlas of Saskatchewan*, edited by J.H. Richards and R.I. Fung, pp. 73-75. Modern Press, Saskatoon.

- Davis, L. B.  
 1966 Avonlea Point Occurrence in Northern Montana and Canada. *Plains Anthropologist* 11(32):100-116.
- Davis, L. B., and E. Stallcop  
 1966 The Wahkpa Chu'gn site (24HL101): Late Hunters in the Milk River Valley, Montana. *Montana Archaeological Society*, Memoir #3.
- Deaver, K. and S. Deaver  
 1988 Prehistoric Cultural Resource Overview of Southeast Montana, Vol. 1. Ethnoscience, Billings, Montana. Submitted to Bureau of Land Management, Miles City, Montana, Contract No. Ya-551-RFp6-340030.
- Dyck, I.  
 1983 The Prehistory of Southern Saskatchewan. In *Tracking Ancient Hunters: Prehistoric Archaeology in Saskatchewan*, edited by H. T. Epp and I. Dyck, pp. 63-139. Saskatchewan Archaeological Society, Regina.
- Dyck, I. and R. Morlan  
 1995 *The Sjo vold Site: A River Crossing Campsite in the Northern Plains*. Mercury Series Paper No.151. Canadian Museum of Civilization Archaeological Survey of Canada, Hull.
- Duke P. and M. C. Wilson  
 1994 Cultures of the Mountains and Plains: From the Selkirk Mountains of the Bitterroot Range. In *Plains Indians, A.D. 500-1500; The Archaeological Past of Historic Groups*, edited by Karl H. Schlesier, pp. 71-95. University of Oklahoma Press, Norman.
- Ellis, J. H., and W. H. Shafer  
 1940 *Report of the Reconnaissance Soil Survey of South-Central Manitoba*. Manitoba Soil Survey, Soils Report 4. Department of Agriculture, University of Manitoba, Winnipeg.
- Finnigan, J.  
 1981 The Elma Thompson Site: A Preliminary Report. *Saskatchewan Archaeological Society Newsletter* 2(4):8-9



- 1982 *Tipi Rings and Plains Prehistory: A Reassessment of Their Archaeological Potential*. Paper No. 108. National Museums of Canada, Archaeological Survey of Canada Mercury Series, Ottawa.
- 1985 *An Archaeological Inventory and Assessment Study of Four Projects for PanCanadian Petroleum Ltd. in the Weyburn Battery*. SRC Technical Report No. 182. Saskatchewan Research Council Publications, No. E-903-7E-88, Saskatoon.
- 1988 *1987 Heritage Investigation at the Rafferty and Alameda Reservoir*. Saskatchewan Research Council Publications No. E-903-6-E-87. Saskatoon.

Fredland, L. B., D. H. and G. Munson

- 1985 Investigation at a Besant Stone Ring Site In Central North Dakota. In *Contribution to Plains Prehistory* edited by D. Brumley, pp. 116-154. Occasional Papers No. 26. Archaeological Survey of Alberta, Edmonton.

Forbis, R. G.

- 1962 The Old Women's Buffalo Jump, Alberta. *National Museums of Canada, Bulletin 180, Contributions to Anthropology, 1960*, Part 1:55-125.

Frison, G. C.

- 1971 The Buffalo Pound in Northwestern Plains Prehistory: Site 48 CA 302, Wyoming. *American Antiquity* 36(1):77-91.
- 1978 *Prehistoric Hunters of the High Plains*. Academic Press, New York.

Gibson, T. H.

- 1978 Archaeological Testing of the Biggar Bone Site 1978. *Saskatchewan Archaeological Society Newsletter*. 53(4):15-24).

Gibson, T. H. and P. McKeand

- 1992 Excavation of the Crane Site, DiMv-93. Unpublished draft manuscript, on file at Western Heritage Services Inc. Saskatoon.

Good K. N. and J. L. Hauff

- 1977 The Highway 8 Site, 32DU2, Garrison Reservoir, North Dakota. Report prepared for the U. S. Army Corps of Engineers, Omaha District. Contribution 65, University of North Dakota, Department of Anthropology and Archaeology, Grand Forks.

Gregg, M. L.

- 1983 A Summary of Mondrian Tree Site Archeological Excavations. In Archeological Excavations at the Mondrian Tree Site (32MZ58), McKenzie County, *North Dakota*, edited by Dennis L. Toom and Michael L. Gregg, pp. 23-45. Department of Anthropology and Archaeology, University of North Dakota, Grand Forks. Submitted to the Northern Border Pipeline Co., Omaha.
- 1984 *An Overview of the Prehistory of Western and Central North Dakota, Class 1 Cultural Resource Inventory, Dickinson District*, Bureau of Land Management, Billings.
- 1985a *An Overview of the Prehistory of Western and Central North Dakota*. Cultural Resources Series, No.1. Bureau of Land Managment, Montana.
- 1985b Archaeological Classification and Chronology for Western and Central North Dakota . In *An overview of the Prehistory of Central and Western North Dakota*, edited by Michel L. Gregg and Dale Davidson, pp. 67-78. Bureau of Land Management, Billings.
- 1987a (editor) Archaeological Examination of the Naze Site (32SN246). Submitted to the U.S. Bureau of Reclamation, Billings, Montana. Department of Anthropology, University North Dakota, Grand Forks.
- 1987b Knife River Flint in the Northeastern Plains. *Plains Anthropologist* 32(118):367-77.

- 1990 An Early Plains Woodland Structure in the Northwestern Plains, *Plains Anthropologist* 35(127):29-44.
- 1994 Archaeological Complexes of the Northern Plains and Prairie-Woodland Border. In *Plains Indians, A.D. 500-1500: the Archaeological Past of Historic Groups*, edited by Karl H. Schlesier, pp. 71-95. University of Oklahoma Press, Norman.
- Gregg, M. L., and P. R. Picha  
 1989 Early Plains Woodland and Middle Plains Woodland Occupation of the James River Region in Southeastern North Dakota. *Midcontinental Journal of Archaeology* 14 (1): 38-61.
- Gregg, M. L., D. Meyer, P. R. Picha, and D. G. Stanley  
 1996 Archeology of the Northeastern Plains. In *Archeological and Bioarcheological Resources of the Northern Plains*, edited by George C. Frison and Robert C. Mainford, pp. 77-90. Arkansas Archeological Survey Research Series No. 47. Fayetteville.
- Greiser, S. T.  
 1994 Late Prehistoric Cultures on the Montana Plains. In *Plains Indians, A.D. 500-1500: the Archaeological Past of Historic Groups*, edited by K. H. Schlesier, pp. 34-55. University of Oklahoma Press, Norman.
- Griffin, J. B.  
 1952 *Some Early and Middle Woodland Pottery Types in Illinois*. Illinois State Museum, *Scientific Papers*, Vol. 5, No.3. Springfield.
- 1958 *The Chronological Position of the Hopewellian Culture in the Eastern United States*. Anthropological Papers 12, Museum of Anthropology: University of Michigan, Ann Arbor.
- Griffin, J. B., R. E. Flanders, and P. F. Titterington  
 1970 *The Burial Complex of the Knight and Norton Mounds in Illinois and Michigan*. Memoirs of the Museum of Anthropology 2. University of Michigan, Ann Arbor.

- Gruhn, R.  
 1971 Preliminary Report on the Muhlbach Site: A Besant Trap in Central Alberta. *National Museum of Canada Bulletin* 235:128-156.
- Haberman, T. W. and M. Travis  
 1995 Radiocarbon Dates for the Stelzer Site, 39DW242, Dewey County, South Dakota. *Plains Anthropologist* 40(151): 73-76.
- Hannus, L. A.  
 1994 Cultures of the Heart Land: Beyond the Black Hills. In *Plains Indians, A.D. 500-1500: the Archaeological Past of Historic Groups*, edited by Karl H. Schlesier, pp. 176-198 University of Oklahoma Press, Norman.
- Hill, A. T. and M. Kivett  
 1941 Woodland -Like Manifestations in Nebraska. *Nebraska History* 21 (3).
- Hjermstad, B.  
 1996 The Fitzgerald Site: A Besant Pound and Processing Area On the Northern Plains. Unpublished M. A. thesis, Department of Anthropology and Archaeology, University of Saskatchewan, Saskatoon.
- Hlady, W.M.  
 1970 Manitoba: the Northern Woodlands. In *Ten Thousand Years: Archaeology in Manitoba*, edited by W. M. Hlady, pp. 93-121. Manitoba Archaeological Society.
- Hurt, W. R., Jr.  
 1952 *Report on the Investigation of the Scalp Creek Site 39GR1 and the Ellis Creek Site 39GR2, Gregory County, South Dakota.* Archaeological Studies Circular No.4. South Dakota Archaeological Commission, Vermillion.
- Jennings, J. D.  
 1974 *Prehistory of North America*, 2nd edition. New York.

Johnson, A. M.

- 1977a The Dune Buggy Site, 24RV1, and Northwestern Plains Ceramics. *Plains Anthropologist* 22(75):37-49.
- 1977b Woodland and Besant in the Northern Plains: a Perspective. *Archaeology in Montana* 18(1):27-41.
- 1988 Parallel Grooved Ceramics: an Addition to Avonlea Material Culture. In *Avonlea Yesterday and Today: Archaeology and Prehistory*, edited by Leslie B. Davis, pp 137-143. Saskatchewan Archaeological Society.

Joyes, D. C..

- 1969 The Avery Site at Rock Lake: a Prehistoric Campsite in Southwestern Manitoba. Unpublished M. A. Thesis, University of Manitoba.
- 1970 The Cultural Sequence at the Avery Site at Rock Lake. In *Ten Thousand Years: Archaeology in Manitoba*, edited by W. Hlady, pp. 209-222. Manitoba Archaeological Society.

Kehoe, A. B.

- 1959 Ceramic Affiliations in the North Western Plains. *American Antiquity* 25(2):237-246.

Kehoe, T. F.

- 1960 *Stone Tipi Rings in North Central Montana and the Adjacent Portion of Alberta, Canada: Their Historical, Ethnological and Archaeological Aspects*. Bureau of American Ethnology Bulletin 173, Anthropological Paper 62:421-473. Washington.
- 1964 Middle Woodland Pottery from Saskatchewan. *Plains Anthropologist* 9(23):51-53.
- 1966 Fieldwork Conducted During 1965 by the Saskatchewan Museum of Natural History. *Plains Anthropologist* 11(32):160.
- 1973 *The Gull Lake Site: A Prehistoric Bison Drive Site in Southwestern Saskatchewan*. Publications in Anthropology and History 1. Milwaukee Public Museum, Milwaukee.

1974 The Large Corner-notch Point System of the Northern Plains and Adjacent Woodlands. In *Aspects of Upper Great Lakes Anthropology*, edited by Eldon Johnson, pp 103-114. Minnesota Prehistoric Archaeology Series 11. Minnesota Historical Society, St. Paul.

Kehoe, T. F. and A. B. Kehoe

1968 Saskatchewan. In *The Northwestern Plains: A Symposium*, edited by W.W. Caldwell and S. T. Conner, pp 21-36. Rocky Mountain College, Billings.

Kivett, Marvin F.

1949 *A Woodland Pottery Type from Nebraska*. Proceedings of the Fifth Plains Conference for Archaeology. Notebook 1: 676-69. Laboratory of Anthropology , University of Nebraska, Lincoln.

1952 *Woodland Sites in Nebraska*. Publications in Anthropology No.1, Nebraska State Historical Society, Lincoln.

Kordecki, Cynthia, Dennis L. Toom, and Michael A Jackson

1993 Cultural Resources Inventory of the Jamestown Reservoir Project Area, Stutsman County, North Dakota, 1992. Submitted to the U.S. Bureau of Reclamation, Dakota Area Office, Bismarck, North Dakota. Department of Anthropology, University of North Dakota, Grand Forks.

Kroker, S.

1990 Archaeology and Hydro-Electric Development in Northern Manitoba: A Retrospective on the Churchill River Diversion and Nelson River Power Development. *Manitoba Archaeological Quarterly* 14, (1-4).

Kuchler, A. W.

1964 *Potential Natural Vegetation of the Coterminous United States*. American Geographical Society Special Publication 36. New York.

Lehmer, D.J.

- 1954 *Archaeological Investigation in the Oahe Dam Area, South Dakota 1950-51*. Bureau of American Ethnology Bulletin 158. Smithsonian Institution, Washington.

Longley, Richard W.

- 1972 *The Climate of the Prairie Provinces*. Climatological Studies No. 13, Environment Canada, Atmospheric Environment. Toronto.

Loveseth, B

- 1983 Historical Resources Impact Assessment and Archaeological Conservation Studies, Sundance Oil Canada Ltd. 1981 Oil Gathering System Expansion and Alterations, Wintering Hills, Alberta. Report on file, Archaeological Survey of Alberta, Edmonton.

Malainey, M.

- 1991 Internal and External Relationships of Saskatchewan Pottery Assemblages: Circa A.D. 1300 to Contact, Unpublished M.A. thesis. Dept. of Anthropology and Archaeology, University of Saskatchewan, Saskatoon.
- 1995 Functional Analysis of Precontact Pottery from West-central Canada. *Manitoba Archaeological Journal*, 5(2):60-85.

Malainey, M. and B. L. Sherriff

- 1996 Adjusting Our Perceptions: Historical and Archaeological Evidence of Winter on the Plains of Western Canada. *Plains Anthropologist* 41(158):333-358.

Mandelbaum, D. G.

- 1940 *The Plains Cree*. Anthropological Papers of the American Museum of Natural History, Vol. 37, Part 2, New York.

MacNeish, R. S. and K. H. Capes

- 1958 The United Church Site on Rock Lake, Manitoba. *Anthropologica* 6: 119-155.

Mason, R. J.

1969 Laurel and North Bay. Diffusion Networks in the Upper Great Lakes. *American Antiquity* 34(3):295-302.

1970 Hopewell, Middle Woodland, and the Laurel Culture: a Problem in Archaeological Classification. *American Anthropologist* 72:805-815.

Meyer, D.

1987 Time-Depth of the Western Woods Cree Occupation of Northwestern Ontario, Manitoba and Saskatchewan. In *Papers of the Eighteenth Algonquian Conference*, edited W. Cowen, pp. 187-200. Carleton University, Ottawa.

Meyer, D., M. Rollans and J. Finnigan

1991 The Case For (Canadian) Besant Pottery. Paper Presented at the Third North East Plains Ceramic Symposium, Oct. 1991. Brandon. Manitoba.

Meyer, D. and S. Hamilton

1994 Neighbors to the North: Peoples of the Boreal Forest. In *Plains Indians, A.D. 500-1500: the Archaeological Past of Historic Groups*, edited by Karl H. Schlesier, pp. 96-127. University of Oklahoma Press, Norman.

McGregor, J. C.

1958 *The Pool and Irving Villages*. University of Illinois Press, Urbana.

Miller, E. M., B. R. Waitkus, and D. G. Eckles

1987 A Woodland-Besant Occurance in Central Wyoming, *Plains Anthropologist* 32(118):420-423.

Morgan, G. R.

1979 *An Ecological Study of the Northern Plains as Seen Through the Garratt Site*. Occasional Papers in Anthropology No.1. General editor, G.W. Arthur. Department of Anthropology, University of Regina.



Morlan, R. E.

- 1988 Avonlea and Radiocarbon Dating. In *Avonlea Yesterday and Today: Archaeology and Prehistory*, edited by Leslie B. Davis, pp 291-309. Saskatchewan Archaeological Society, Saskatoon.

Neuman, R.

- 1960 The Truman Mound Site, Big Bend Reservoir Area, South Dakota. *American Antiquity* 26(1):78-92.
- 1961 The Olson Mound (39BF223), Buffalo County, South Dakota. *Plains Anthropologist* 6(13):164-170.
- 1975 The Sonota Complex and Associated Sites on the Northern Great Plains. *Publications in Anthropology* #6. Nebraska State Historical Society, Lincoln.

Newman, T. M.

- 1955 Documentary Sources on the Manufacture of Pottery by the Indians of the Central Plains and Middle Missouri. *Plains Anthropologist* 4:13-20.

Nicholson, B. A.

- 1982 The Kain site, "Archaeology today", *Manitoba Archaeological Quarterly* 9(4): 23,25.
- 1986 Human Ecology and Prehistory of the Forest/Grassland Transition Zone of Western Manitoba. Unpublished Ph. D. dissertation, Department of Archaeology, Simon Fraser University. Burnaby.
- 1987 Cultural History of the Forest/Grassland Transition Zone of Western Manitoba and Relationships to Cultures in Adjacent Regions, *Manitoba Archaeological Quarterly* 11(2 and 3): 41-42.
- 1995 *Nahastewin* (Where Things are Put Away) *Manitoba Archaeological Journal* 5(1):67-80.

- Norwark, T. R., L. A. Hannus, and E. J. Lueck  
 1982 A Prehistoric and Historical Overview of Northeastern South Dakota. In *Cultural Resource Investigation of the South Dakota Segment of the Northern Border Pipeline Project*, vol. 4, edited by L. A. Hannus, pp. 25.1-25.74. Northern Plains Natural Gas, Omaha.
- O'Brien, P.  
 1994 The Central Lowland Plains : An Overview. In *Plains Indians, A.D. 500-1500: the Archaeological Past of Historic Groups*, edited by Karl H. Schlesier, pp.199-123. University of Oklahoma Press, Norman.
- Peach, A. K.  
 1988 A Faunal Analysis of the Mullet Site (DiMd-7): a Besant Processing Site in Southern Manitoba. Unpublished manuscript from the University of Brandon.
- Pettipas, L. F.  
 1994 "*Other Peoples Heritage*" A Cross-Cultural Approach to Museum Interpretation. Canadian Cataloguing in Publication Data. Winnipeg.
- Playford, T.  
 1996 Two Thousand Years of Occupation at Nahastewin: a Sacred Site in Southwestern Manitoba. Thesis submitted in partial fulfilment of the Bachelor of Arts Degree in the Department of Anthropology, University of Brandon.
- Plog, F.  
 1977 Archaeology and the Individual. In *The Individual in Prehistory: Studies in Variability in Style in Prehistoric Technologies*, edited by J. N. Hill and J. Gunn, pp. 13-21. Academic Press, New York.
- Plog, S.  
 1980 *Stylistic Variation in Prehistoric Ceramic: Design Analysis in the American Southwest*. Cambridge University Press, New York.

- Pollock, J.  
 1978 *Early Cultures of the Clearwater River Area*. Occasional Paper No. 6, Archaeological Survey of Alberta, Alberta Culture, Edmonton.
- Potter, J. G.  
 1965 *Snow Cover*. Climatological Studies No.3. Canadian Department of Transport Meteorological Branch, Toronto.
- Poulson, L.  
 1980 The Richards Site: A Sonota Site in Central Manitoba. *Archaeofacts* 7(3&4):1-39.
- Quigg, J. M.  
 1974 *The Belly River: Prehistoric Population Dynamics in a Northwestern Plains Transitional Zone*. Mercury Series Paper No. 23. National Museums of Canada. Archaeological Survey of Canada, Ottawa.
- 1986 *Ross Glen: A Besant Stone Circle Site in Southeastern Alberta*. Manuscript Series No.10, Archaeological Survey of Alberta, Edmonton.
- Ramsay A. M.  
 1991 The Melhagen Site: A Besant Kill In South Central Saskatchewan. Unpublished M. A. thesis, Department of Anthropology and Archaeology, University of Saskatchewan, Saskatoon.
- Reid C. S. and G. Rajnovich  
 1991 Laurel: A Re-evaluation of the Spatial, Social and Temporal Paradigms. *Canadian Journal of Archaeology* 15:193 -234.
- Reeves, B. O. K.  
 1970a Culture Change on the Northern Plains 1000 B. C.-A.D. 1000. Unpublished Ph. D. dissertation, Department of Archaeology, University of Calgary, Calgary.
- 1970b Culture Dynamics in the Manitoba Grasslands 1000 B.C. A.D. 700. In *Ten Thousand Years: Archaeology in Manitoba*, edited by W.M. Hlady, pp. 153-174. D.W. Friesen and Sons Ltd., Altona.

- 1978 Head-Smashed-In: 5000 Years of Bison Jumping in the Alberta Plains. In *Bison Procurement and Utilization: A Symposium*, edited by L.B. Davis and M. Wilson, pp. 151-174. Plains Anthropologist, Memior 14.
- 1983 *Cultural Change in the Northern Plains: 1000 B.C.-A.D. 1000*. Occasional Papers No. 20. Archaeological Survey of Alberta, Edmonton.
- Rollans, M., O. Klimko, P. McKeand, M. Greene
- 1992 The Ratigan Site DhMs-10, Souris Basin Heritage Study, Western Heritage Services, Saskatoon Saskatchewan. Unpublished draft on file at Western Heritage Services Inc., Saskatoon.
- Rowe J. S.
- 1972 *Forest Regions of Canada*. Canadian Department of Northern Affairs and Natural Resources Bulletin 123. Canadian Department of Northern Affairs and Natural Resources, Ottawa.
- Sanders W. T. and J. Marino
- 1970 *New World Prehistory: Archaeology of the American Indian*. Prentice-Hall Inc., Englewood Cliffs.
- Saylor, B.
- 1980 Besant Projectile Points. *Manitoba Archaeological Journal* 3 (3-4):36-40
- Schlesier K. H.
- 1987 *The Wolves of Heaven : Cheyenne Shamanism, Ceremonies, and Prehistoric Origins*. University of Oklahoma Press, Norman.
- 1994 Commentary: A History of Ethnic Groups in the Great Plains, A.D. 150-1550. In *Plains Indians, A.D. 500-1500: The Archaeological Past of Historic Groups*, edited by Karl H. Schlesier, pp. 308-381. University of Oklahoma Press, Norman.

Schneider, F.

1981 Archaeology in North Dakota. Paper presented at the Fall meeting of the North Dakota Archaeological Association, Bismark.

1982 Sprenger: a Tipi Ring Site in Central North Dakota. *Pathways to Plains Prehistory*, edited by D. G. Wyckoff and J. L. Hoffman, pp. 175-198. Memoir 3, Oklahoma Anthropological Society.

Scribe, B.

1996a Pinew Watchi, Wapiti Sakihtaw and Wawaskesiw Mitaskun: Plains Woodland (Pottery Bearing) Sites in South-Central Manitoba. *Manitoba Archaeological Journal* 6(2):82-95.

1996b Besant (Sonota) Pottery on the Canadian Grasslands. *Proceedings and Abstracts: 6th Annual Apala Student Conference*, edited by B. Low and R. Wondrasek, pp. 38-42. Department of Anthropology and Archaeology, University of Saskatchewan, Saskatoon.

Scribe B. and B. A. Nicholson

1994 Excavations at the Middle Woodland *Pinew Watchi* and *Wapiti Sakihtaw* Sites on the Big Tiger Geoform: A First Nation Training Project. *Manitoba Archaeological Journal* 4(1&3):113-128.

Shay, C. T.

1980 Food Plants of Manitoba. In *Directions in Manitoba Prehistory: Papers in Honour of Chris Vickers*, edited by L. Pettipas, pp. 233-290. Manitoba Archaeological Society, Winnipeg .

Sharrock, S. R.

1974 Crees, Cree-Assiniboin, and Assiniboin: Interethnic Social Organization on the Far Northern Plains. *Ethnohistory* 21(2):96-122.

- Stoltman, J. B.  
 1973 *The Laurel Culture in Minnesota*. Minnesota Prehistory Archaeology Series No 8. Minnesota Historical Society, St. Paul.
- Strong W. L and K. R. Leggat  
 1981 *Ecoregions of Alberta*. Technical Report No. T/4. Alberta Energy and Natural Resources, Edmonton.
- Struever, S.  
 1965 Middle Woodland Culture History in the Great Lakes Riverine Area. *American Antiquity* 31(2):211-23.
- Struever, S. and G. I. Houart  
 1972 An Analysis of the Hopewell Interaction Sphere. In *Social Exchange and Interaction*, edited by M. Wilmsen. Anthropological Papers 46, Museum of Anthropology. University of Michigan, Ann Arbor.
- Syms, L.  
 1977 *Cultural Ecology and Ecological Dynamics of the Ceramic Period in Southwestern Manitoba*. Plains Anthropologist Memoir 13.
- Tiffany, J. A.  
 1978 Middle Woodland Pottery Typology from Southwestern Iowa. *Plains Anthropologist* (81):169-182.
- Vickers, J. R.  
 1986 *Alberta Plains Prehistory: A Review*. Occasional Paper No. 27 Archaeological Survey of Alberta, Edmonton.
- 1994 Cultures of the Northwestern Plains: From the Boreal Forest Edge To Milk River. In *Plains Indians, A.D. 500-1500: The Archaeological Past of Historic Groups*, edited by Karl H. Schlesier, pp. 3-33. University of Oklahoma Press, Norman.
- Walde D., D. Meyer and W. Unfreed  
 1995 The Late Period on the Canadian and Adjacent Plains. *Revista de Arqueologia Americana* (Journal of American Archaeology) 9:7-66.

- Wedel, W. R.  
 1953 Some Aspects of Human Ecology in the Central Plains.  
*American Anthropologist* 55(4):499-513.
- Wettlaufer, B  
 1955 *The Mortlach Site in the Besant Valley of Central Saskatchewan*.  
 Anthropological Series No.1, Department of Natural Resources,  
 Regina.
- Wettlaufer, B and W. J. Mayer-Oakes  
 1960 *The Long Creek Site*. Department of Natural Resources  
 Anthropological Series 2, Department of Natural Resources,  
 Regina:
- Wheeler R. P. and A. M. Johnson.  
 1985 A Stratified Woodland Site in the Oahe Reservoir, South  
 Dakota. *South Dakota Archaeology* 8 & 9.
- Will G. F. and T. C. Hecher  
 1944 The Upper Missouri River Valley Aboriginal Cultures in  
 North Dakota. *North Dakota Historical Quarterly* 11(1& 2).
- Willey, G. R., and P. Philips  
 1958 *Method and Theory in American Archaeology*. University of  
 Chicago Press, Chicago.
- Wilford, L. A.  
 1955 Revised Classification of the Prehistoric Cultures of Minnesota.  
*American Antiquity* 21:(2):130-142.
- Winham R. P, and E. J. Lueck  
 1994 Cultures of the Middle Missouri. In *Plains Indians, A.D. 500-1500: The Archaeological Past of Historic Groups.*, edited by  
 Karl H. Schlesier, pp.149-175. University of Oklahoma Press,  
 Norman.
- Wood, W. Raymond  
 1959 Two Woodland Vessels from North Dakota. *American  
 Antiquity* 25:123-125.

- 1960 The Boundary Mound Group (32SI-1): an Eastern Woodland complex in North Dakota. *Plains Anthropologist* 4:27-38.
- 1962 Cord-roughened Pottery in North Central North America. *Plains Anthropologist* 7(18):232-236.
- 1967 *An Interpretation of Mandan Culture History*. Bureau of American Ethnology Bulletin 198. River Basin Survey 39, Washington.
- 1970 Night Walker's Butte Pottery Description. Manuscript in possession of the author.
- Wood, W. R., and A. M. Johnson
- 1956 A Woodland Site Near Williston, North Dakota. *Plains Anthropologist* 6:21-24.
- 1973 High Butte, 32ME13: a Missouri Valley Woodland-Besant site. *Archaeology in Montana* 14(3):35-83.
- Wright, J. V.
- 1967 *The Laurel Tradition and the Middle Woodland Period*. Bulletin 217. National Museum of Canada, Ottawa.